Lodi General Plan Update

Working Paper #2

Urban Design and Livability

October 2007

Draft

Opportunities & Challenges Assessment

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Prepared By

DYETT & BHATIA
Urban and Regional Planners

Professor Michael Southworth

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1 Introduction and Purpose

Lodi's current General Plan was adopted in 1991 and is nearing its 2007 horizon. In fall 2006—Lodi's centennial year—the City initiated a comprehensive update of the General Plan. While many of the 1991 Plan's policies are still relevant, the context and the setting on which the General Plan was based have changed since its preparation more than 15 years ago. The General Plan Update is an exciting opportunity for community members to explore long-term goals and development potentials for the city.

As part of the General Plan Update process, four working papers documenting existing conditions, trends, and planning issues and implications are being prepared. Topics covered in the papers include:

- Land Use, Transportation, Environment, and Infrastructure (this report);
- Economics and Demographics;
- Urban Design and Livability (this paper); and
- Greenbelt Community-Separator.

This Working Paper does not contain any policies, and as such, is not intended to be adopted by the City Council.

1.1 PURPOSE OF THE GENERAL PLAN UPDATE

The General Plan is a document adopted by the City Council to guide future development and conservation in and around the City of Lodi. The General Plan can be described as the framework within which decisions on how to grow, provide public services and facilities, and protect and enhance the community must be made. The General Plan also expresses broad community values and goals, gives a picture of how the city should look in the future, and outlines steps to get there.

By law, the General Plan must be long range and comprehensive and include policies on land use, circulation, parks and open space, housing (which is handled in a separate document), conservation, safety, and noise. Lodi's General Plan will also cover urban design and livability, which will be informed by the analysis in this paper. Livability is a cross-cutting issue that is affected by all of the required General Plan topics, with maintaining and improving quality of life in Lodi an overarching concept in the General Plan's updated policies.

1.2 KEY OBJECTIVES AND COMMUNITY ISSUES

The new General Plan will manage Lodi's growth into a to a vibrant 21st century town, with livable neighborhoods, smart economic development, and preservation of agricultural assets. The General Plan will create a vision defining:

- Lodi's place in the region;
- The city's identity;
- How neighborhoods and districts are structured;
- Physical growth and development management;
- Growth of the wine industry and tourism;
- Greenbelt / community separator;
- Economic and development strategy;
- Downtown, neighborhood, and key corridor revitalization;
- Quality of life; and
- Housing options.

By establishing policies future growth and development, the General Plan will help manage Lodi's ongoing transformation and ensure its continued growth and vitality.

1.3 REPORT ORGANIZATION

This Working Paper on *Urban Design and Livability* is one of four working papers that will be used to analyze the opportunities and challenges in Lodi. This assessment is a key step in the General Plan Update process, and provides baseline information on existing conditions in the city, focusing on its physical environment and built form. It also describes opportunities, challenges, and preliminary planning issues that will be considered further in subsequent steps of the General Plan process.

Specifically, this and the other working papers will be used as the basis for:

- Preparing alternative land use and transportation plans (sketch plans);
- Policy formulation for the new General Plan; and
- The Environmental Impact Report (EIR) to be prepared for the General Plan.

This paper explores the inter-relationship between livability and urban design, reviews residents' perceptions of Lodi, and analyzes neighborhood and citywide form in light of these topics. The paper concludes with a discussion of the issues found and how this would affect the General Plan update.

More specifically, the chapters cover the following topics:

- Definition and role of livability and urban design
- Survey of residents' attitudes
- How density is perceived
- Current pattern of density/intensity in Lodi
- Comparison of neighborhood designs
- Defining accessibility
- Accessibility of key resources

1.4 NEXT STEPS

This working paper was preceded by three other papers:

- The *Land Use, Transportation, Environmental Resources, and Infrastructure Assessment Working Paper (#1)* provides an overview of existing conditions, opportunities, and challenges in Lodi. It surveys and analyzes baseline data on land use, transportation, parks, schools and libraries, agriculture, biological and cultural resources, energy and minerals, hydrology and flooding, air quality, hazardous materials, geology, noise, and utilities infrastructure. Much of this information will be used directly in the General Plan Update and its Environmental Impact Report.
- The *Economics Working Paper (#3)* would present growth trends, likely demand for various land uses—including retail demand by segment—and opportunities, challenges, and possibilities for their arrangement in Lodi's future.
- The *Greenbelt Conservation Strategies Working Paper (#4)* report will focus on the issue of the greenbelt—its viability, size, location, and feasible implementation techniques and incentives—as critical component of the General Plan process. In effect, the very definition of the Planning Area/viable Sphere of Influence would rest to some degree on the viability of techniques for agricultural conservation.

Together, the working papers provide a comprehensive assessment of the opportunities and constraints facing Lodi, and form the research and analysis phase of the project. Following public presentations and reviews

of these reports, City staff and the project team will prepare several alternative sketch plans. These land use alternatives will be based on results from stakeholder interviews, community workshops, mail-in surveys, and issues, opportunities, and challenges identified in the working papers. The alternatives will be reviewed with the community, following which a preferred alternative will be identified.

Once a preferred alternative has been developed and selected by the community, work on the Draft General Plan will begin. The General Plan will include goals, policies and implementation strategies to ensure that visions and policies are carried throughout implementation. A comprehensive EIR will also be prepared along with the General Plan. A variety of implementing regulations—such as zoning—and the Capital Improvements Program will need to be revised to be consistent with the Plan following its adoption.

Public meetings and workshops will be held throughout this process in order to maintain ongoing communication and feedback with the community.

2 Role of Livability and Urban Design

Planning for Lodi's livability encompasses many aspects of its life that affect how well the city works for everyone including such diverse qualities as employment opportunities, housing affordability, and the quality of schools and public services, as well as community events, protection from natural disasters and pollution, and absence of crime. However, economic and social conditions are not the only qualities that enhance livability. For most residents livability begins with their neighborhood. The physical form of a neighborhood contributes significantly to its livability and long-term success as a place to live. Factors include the quality and character of its public spaces, as well as of its built form. Convenient access systems are essential, including pedestrian and bicycle access; connectivity of the street grid; block size; convenient access to parks and recreation, schools, libraries; local shops and services; and transportation systems that allow easy movement by a variety of means. Residential environments need to be comfortable as well as safe and must be designed to support the needs of diverse groups including young children, adolescents, elderly, handicapped, single adults, and families. A highly livable city respects its natural setting and builds on its landscape qualities as well as on its history, providing visible connections with its past. Table 2-1 lists physical attributes of a city that contribute to its overall sense of livability.

The Farmers' Market animates School Street on Thursday evenings.

Tree-lined School Street is a human-scaled setting for activities.

Historic neighborhoods invite strollers of all ages.

Table 2-1: Measurable Attributes of Lodi's Physical Environment that May Contribute to Livability

Natural Factors	Landscape types
	Sun/shadow; solar access
	Microclimate: wind, extreme temperatures, rain
	Historic landscapes
	Habitats; habitat connectivity/gaps
	Hazards: fire, flood, earthquake faults and epicenters
Built Form	Scale/massing/transparency
	Grain: coarse/fine; heterogeneous/homogeneous
	Building types, materials, character, condition
	Historic structures
Public Spaces	Open spaces, parks, plazas, social spaces
	Patterns of use/types of use
Views	landmarks, corridors; prominent natural features
Activity	Visible activity/pedestrian activity/people generating uses
	Night life/24 hour activity
	Diversity/mixed use vs. single use
	Grain of activities/local access to daily needs
Access	Pedestrian access, routes, conflicts
	Bicycle access
	Transit access
Street and Path Systems	Locations of walkways, bikeways, trails, scenic parkways
	Streetscape continuity; street definition
	Street patterns, intersection patterns, block sizes, problem intersections
	Sidewalk and street widths
	Streetscape (lighting, paving, furniture, signing, fences, etc)
	Street tree inventory and pattern
	Barriers to movement
Control	Public property ownership, public control
Other	Noise contours
	Waste spaces/soft spaces/adaptable spaces
	Maintenance
	Safety, accidents, crimes

Lodi is a very livable community and people want it to stay that way. Well-situated away from the urban traffic and sprawl of the Bay Area, it enjoys a favorable Central Valley climate. Its downtown is well-kept and attractive, with history and human scale. Visible history is far more than picturesque. What may seem to be only surface charm in "old" or "historic" neighborhoods or districts is the subconscious reassurance of community stability. Meanwhile, Lodi's human scale benefits from close and overlapping land use relationships that have evolved ideally.

The multi-modal transit center serves shopping, entertainment, civic, and cultural facilities in the city's compact walkable core. Intercity buses, trains and local bus service all converge at the depot on Sacramento Street beside the historic Pine Street gateway, a location symbolic of the birth of the city since the arrival of the Southern Pacific Railroad in 1869 spurred Lodi's development. Considering the significance of the railroad in the city's history, it is appropriate that public transit is centered on this core location.

Lodi's livability deteriorates at the edges of the city where streets are less walkable and less interesting in automobile-dominated corridors. Most development along the peripheral arterials is walled, creating streets with little pedestrian appeal. Land use patterns become quite coarse with "big box" developments and suburban cul-de-sacs that are devoid of history and personality. On the north and west sides of Lodi, large new homes on cul-de-sacs connect to nothing but the wide auto-oriented corridors, and impede access to Mokelumne River. While bicyclists and pedestrians are common on the commercial and residential streets of the core, they are rarely seen in the outer subdivisions of Lodi. High-speed traffic on super-wide streets discourages sustainable modes of movement.

Lodi's 1907 Mission Revival arch by architect E.G. Brown was built for the Tokay Carnival.

The railroad established Lodi's regional importance in 1869.

The Multi-Modal Station combines history and convenience.

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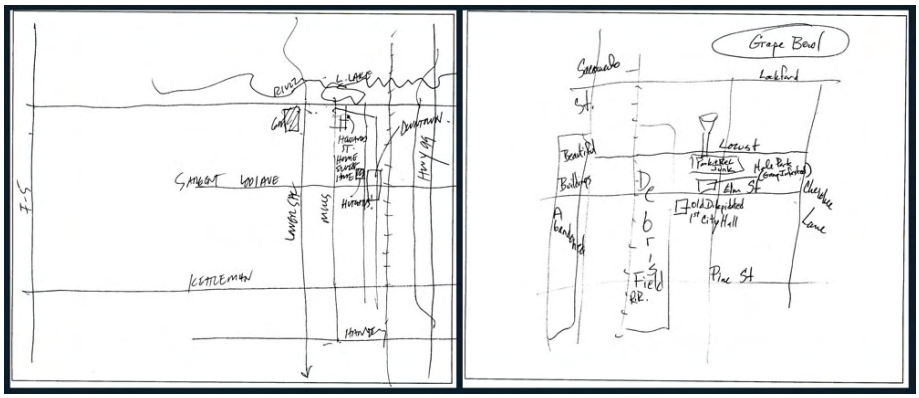
3 Perceptions of Livability

To incorporate the vision of citizens in the General Plan, a community workshop was held at Hutchins Street Square on a Wednesday evening early in summer (13 June, 2007). An invitation to the workshop was mailed (in English and Spanish) to every household in the city. One source of information on the livability values of Lodi residents was a workshop questionnaire, the Lodi Resident Survey. The survey explored livability issues of importance to Lodi residents from most neighborhoods of the city. A separate citywide survey mailed to all Lodi households also included several questions related to livability. It is notable that the results of the citywide survey correlate closely with the results from the in-depth



Residents' image maps of Lodi.

workshop questionnaire.

3.1 LODI RESIDENT SURVEY

The Lodi Resident Survey was developed to help assess residents' attitudes on livability in Lodi (see Appendix). Of the 40 residents who attended the General Plan Workshop, 29 chose to complete the questionnaire. Respondents came from most neighborhoods in the city, although fewer people came from the Eastside than from neighborhoods west of School Street. Due to the small level of participation this could not be considered a large statistically valid sample. Nevertheless, it did bring out a range of issues that were validated by other sources.

Most attendees at the workshop were male. Six women and 21 men filled out the questionnaire; two did not give their age or gender. Average age was about 51.8, with a range of 25 to 73. Respondents have lived in their neighborhoods for an average of 15.1 years, and in Lodi for an average of 24 years. These characteristics are very similar to those of the citywide

survey respondents, who had an average age of 58 and an average of 28 years of residence in Lodi.

Survey respondents first drew maps of their neighborhood and the places that were most important to them, without the aid of a reference map. They also answered ten open-ended questions that explored knowledge and values at both the city and neighborhood scale. This was followed by 20 closed-end questions with a five-point rating scale related to livability attitudes and values. The value rating is a useful measure for policy makers in establishing priorities. By comparing the value or importance respondents place on a characteristic with their satisfaction level, planners can see how successful they have been in meeting perceived needs. Where the satisfaction rating is significantly lower than the importance rating, there is an opportunity to increase livability. The greater the deviation, the more pressing is the need to address the perceived shortfall.

Findings of the livability survey are shown in Table 3-1. Ratings ranged from 0 at the lowest to 5 as the highest. The average responses below 3.0 are in italics and those at or above 4.5 are in bold. In general, the respondents agreed with almost all the statements—only two averaged less than a 3.0—and found all of them important to varying degrees. Participants agreed the least with statements that Lodi has enough green space and that their neighborhood has a mix of housing types, although the latter is not perceived to contribute highly to livability. The most important issues involved attractiveness and comfort at both the citywide and neighborhood levels. A further discussion of the ratings and comments follows.

Table 3-1: Lodi Livability Survey Ratings and Values		
Please rate Lodi and your neighborhood below. *(0=lowest, 5=highest)*	*How much do you agree with this statement?*	*How important is this to you?*
Lodi is an attractive city.	4.1	**4.6**
There are a lot of things to do in Lodi.	3.2	3.7
Lodi is a comfortable place to live.	4.4	**4.6**
The places in Lodi that mean the most to me have been preserved.	3.5	4.0
Lodi has a variety of civic events (festivals, fairs, block parties, street markets, concerts, parades, etc.).	3.9	3.8
Lodi has enough green space.	**2.7**	4.1
Lodi has good neighborhoods.	3.8	**4.5**
My neighborhood has attractive sidewalks and streets (trees, landscaping, paving, lighting).	4.0	**4.7**
My neighborhood is a good place to go for a walk.	**4.5**	**4.5**
I live near a nice park.	4.0	4.2
My neighborhood is a good place for bicycling.	3.8	3.8
Automobile traffic is not a problem for pedestrians and bicyclists in my neighborhood.	3.7	4.0
My neighborhood has a mix of housing types (apartments, houses, duplexes, townhomes).	***2.8***	3.1
Noise is not a problem in my neighborhood.	3.8	4.1
My neighborhood is near shopping and services.	4.0	4.0
My neighborhood has access to public transportation.	3.2	3.2
My neighborhood is near schools and other educational facilities.	4.2	3.6
My neighborhood has recreation facilities and programs for all ages.	3.2	3.7
My neighborhood is safe.	3.9	**4.7**
Overall, my neighborhood is a great place to live.	4.2	**4.7**

Lodi City Hall

Lodi Arch and Pine Street

School Street Gateway on Lodi Avenue

What are the best things about living in Lodi?

It may be that the pride and satisfaction Lodi residents feel about their city is strongly influenced by their esteem for Lodi's downtown. Among cities of its size, Lodi has been unusually successful in maintaining a highly valued core that brings all neighborhoods together.

Residents enjoy the small town, friendly atmosphere of Lodi. Some value good access to diverse shops, services, recreation, and parks. Quiet, safe neighborhoods are important. Many enjoy downtown shops, restaurants, entertainment, and civic amenities. The stark exceptions are those who live in outer neighborhoods (far Eastside, Sunset, Town and Country Townhouses) where destinations and trails are lacking.

Survey respondents stress the friendliness of Lodi residents. They clearly express a high degree of social confirmation in their interactions. The cooperative, positive sense of shared community reinforces the livable physical environment. Respondents mentioned: "Friendly people; the people are wonderful: friendly neighbors; neighborly."

In their different ways, many of the interviewees expressed their appreciation of the surrounding agricultural lands. The sense of enclosure within a ring of agricultural lands is often mentioned. This productive open space is seen by some as historically important to the Lodi story. Others mention the contemporary wineries' contribution to the special character of Lodi.

Summing up the successful Lodi identity, a middle-aged woman explained: "People care about their city [and are] very involved in projects [and] civic activities." Every city would hope its residents would have that attitude.

Residents recommended revitalization and restoration of historic structures on the Eastside such as along Stockton Street.

Some historic Sacramento Street buildings are underutilized.

How would residents improve Lodi as a place to live?

Because there is so much pride in Lodi, there were few suggestions for improvements. The most dominant was preservation and revitalization of vacant or decrepit older buildings, especially on Stockton Street and other parts of the Eastside, but several empty buildings on Sacramento Street were also noted. Bike trails and pedestrian walkways were mentioned. Downtown is an important civic focus and as such motivated suggestions for housing and a hotel to contribute to its increased vitality.

There is great concern with protecting the most attractive features of Lodi: surrounding agricultural lands, large trees, small town feeling, and old buildings. Residents fear most that Lodi could become part of a sprawling suburb of Stockton or Sacramento.

Residents are very concerned about development and its impacts on Lodi's character and livability. They would like to limit growth and prevent sprawl. Most would like to define the edge with a greenbelt.

All Veterans Plaza offers a shady retreat in the middle of the Civic Center.

How attractive is Lodi?

Lodi is considered to be an attractive city by survey respondents (4.1 average), and they value city attractiveness very highly (4.6 average).

Lodi has a collection of architecture in the Panel Brick style.

Have the places that mean the most to residents been preserved?

Historic preservation is highly valued (4.0 average), but respondents are somewhat less convinced that the most meaningful places have been preserved (3.5 average). Achievements in preservation have fallen short of expectations.

Residents feel the neighboring vineyards and other agricultural uses enhance the special character of Lodi.

The handsome Carnegie Forum building was built 1909 as the Andrew Carnegie Library.

Downtown offers diverse activity options.

Does Lodi have enough green space?

Respondents value green space highly (4.1 average), but gave the lowest rating in the survey on this quality, 2.7 average. This is an area that demands attention, according to this group of citizens, as it represents the greatest dissatisfaction of any of the livability measures.

Where do residents like to spend their free time in, other than their yard or home?

Almost all respondents mentioned downtown or the School Street farmers' market, shops and restaurants. They were very positive about the preservation efforts there, the activity options, and amenities of the city. Ten people included Lodi Lake in their leisure time options. Hutchins Street Square was mentioned by several. In contrast, most of those who did not mention any place in Lodi, or who did not mention downtown as a place they like to spend free time, were more negative about Lodi. Thus, the downtown seems to play the traditional role of building city pride and community involvement for those who spend time there.

Are there are a lot of things to do in Lodi?

In terms of activity choices in Lodi, respondents felt there were moderate choices (3.2 average), and they value such choices moderately highly (3.7). Individuals who do not spend free time in downtown Lodi gave lower ratings than those who do.

Hutchins Street Square is not only a major source of community identity and an important resource, but also provides open space within the relatively dense neighborhoods of central Lodi.

Lodi Lake provides a unique place to relax and enjoy nature within in the city.

Are there good recreational facilities and programs for people of all ages?

Respondents gave Lodi only a moderate rating for recreational facilities and programs (3.2). Surprisingly, the quality is not ranked as highly in terms of importance as one might expect—only 3.7 overall.

Does Lodi have a variety of civic events (festivals, fairs, block parties, street markets, concerts, parades, etc.)?

Civic events are valued somewhat highly by survey respondents (3.8 average), and they also feel that Lodi offers a reasonable variety of such events (3.7 average). Their level of satisfaction nearly matches their level of desire.

How satisfied are residents with access to local shopping, services, schools, and parks?

Residents are generally very satisfied with access to local shopping and services (4.0), schools (4.2), and parks (4.0). They also value access quite highly, except for school access, which was rated 3.6. Although those surveyed seemed satisfied with local access, the access maps indicate that a large percentage of Lodi residents are more than one-quarter mile from parks, schools, and local shopping and services (see Chapter 5). The lower desire for school access may reflect a concern for the noise levels of school playgrounds.

Is there a mix of housing types?

Planners often advocate a mix of housing types, yet for respondents to this survey it was only moderately valued (3.1 average). They rated Lodi quite low (2.8 average) on housing diversity. A few respondents stated that their neighborhood did not have a mix of housing types, nor did they desire it.

The farmer's market, Grape Festival, and other events are popular in Lodi.

Central California Traction Company operated electric streetcars on Sacramento Street to Stockton beginning in 1907, and to Sacramento beginning in 1910.

Rail, intercity, and local bus services intersect on Sacramento Street.

Charming old houses and tree-lined walkable streets appeal to Lodi residents.

How good is their access to public transportation?

Access to public transportation is less important (3.2 average) than other livability factors. Respondents give Lodi only a moderate rating (3.2 average) for its public transportation access, so the level of service matches the level of desirability for the survey group. This result is confirmed by the citywide survey. The majority of respondents in the youngest and oldest age brackets supported expanding public transit services, while most of those in between did not see it as a priority.

What neighborhoods in Lodi do residents like best and why?

Many neighborhoods are considered desirable by the survey sample. While the historic tree-shaded neighborhood west of the Civic Center between Ham Lane, West Elm Street, and Lodi Avenue (also referred to as Old Lodi) was most often cited as desirable (38%), positive qualities were noted in many other neighborhoods.

What attracts respondents to the most desirable neighborhoods? Many attributes are mentioned: Character; landscape; old trees; good walking; quiet; safety; beautiful architecture; walking distance to work, entertainment, parks and restaurants; old homes; downtown; Hutchins Street Square; Old Lodi character; large trees; good urban scale; close to downtown shops and restaurants.

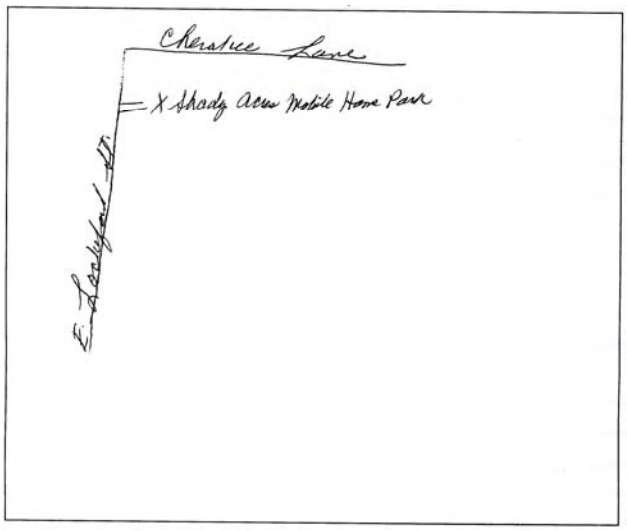
Being able to walk and bicycle both in their neighborhoods and to other destinations is mentioned by some, and most residents consider their neighborhood a good place to walk and bicycle.

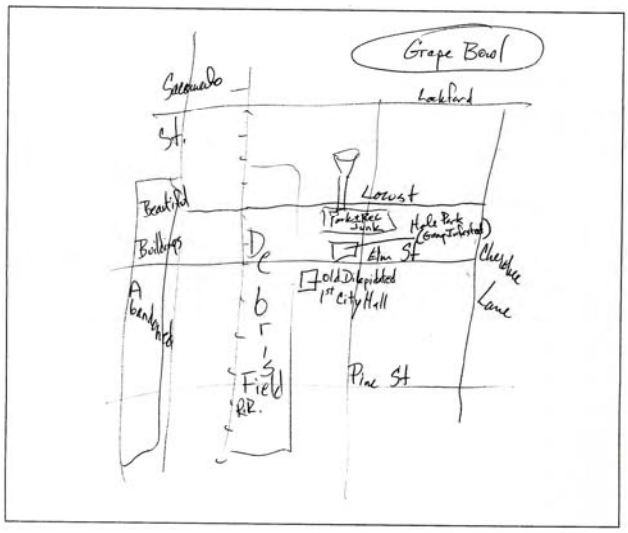
How satisfied are residents overall with their own neighborhood?

The survey results suggest that most Lodi residents are happy with their own neighborhoods with a few exceptions. Overall, respondents to the survey rated their neighborhoods 4.2 on a 5-point scale, with 5 being the highest rating. They consider Lodi to be a very comfortable place to live (4.4 average) and place high value on this quality (4.6). Residents highly value having good neighborhoods (4.5 average), but rate Lodi neighborhoods overall somewhat lower (3.8).

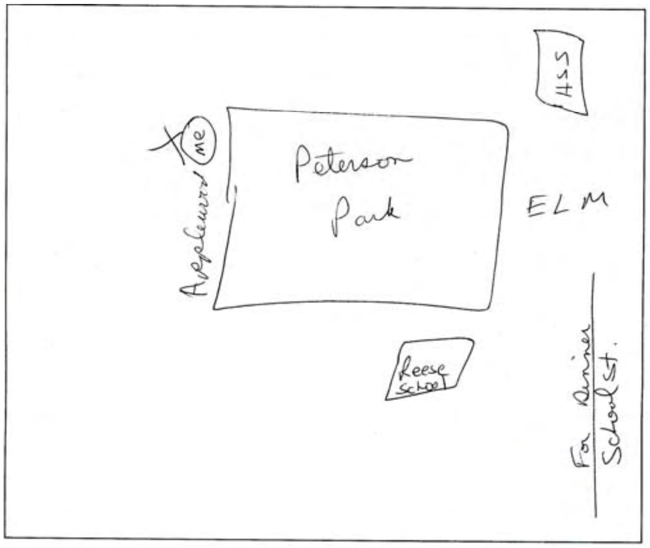
Many of those completing the surveys went so far as to describe their own neighborhood as their ideal place to live in Lodi. Outside their own neighborhood, the ideal neighborhoods were those in central Lodi with mature trees and old housing stock.

Although Lodi residents seem very satisfied with their own neighborhoods, they do have many suggestions for improvement and are somewhat wary of changes they see elsewhere in the city.





Downtown and East Side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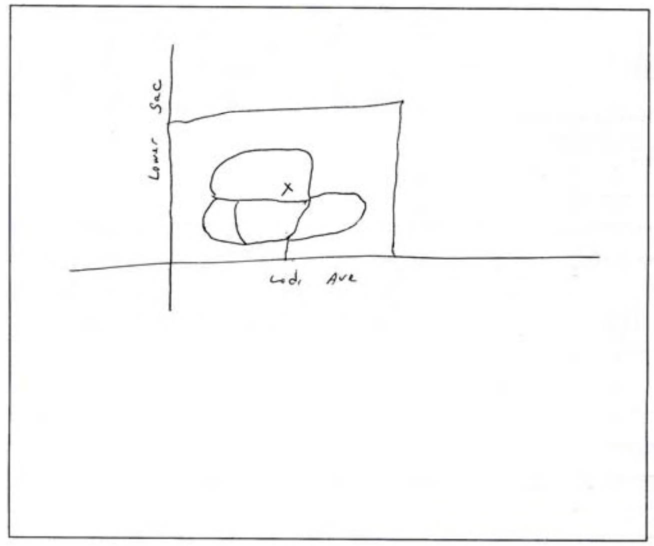
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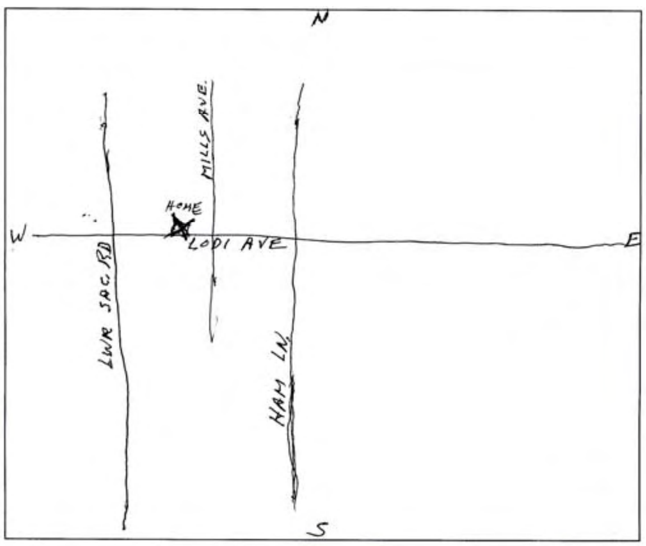
Lodi Ave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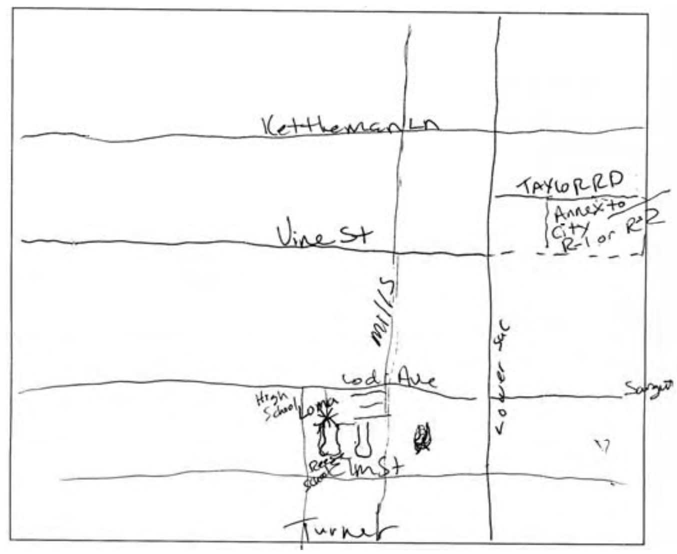
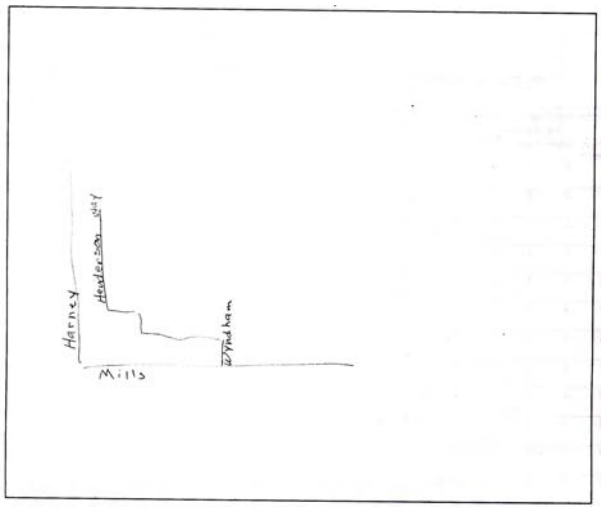
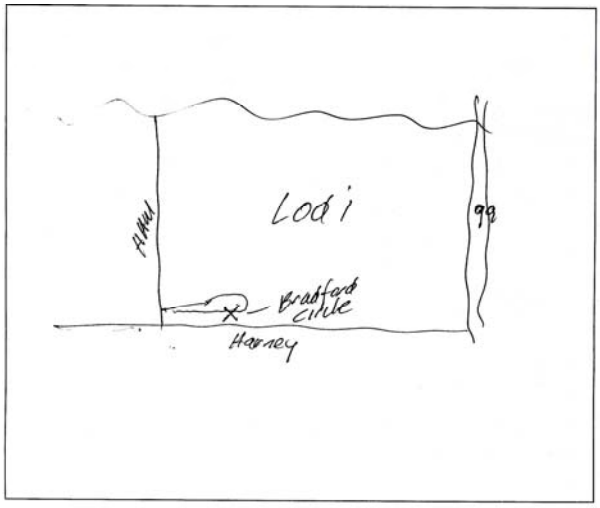
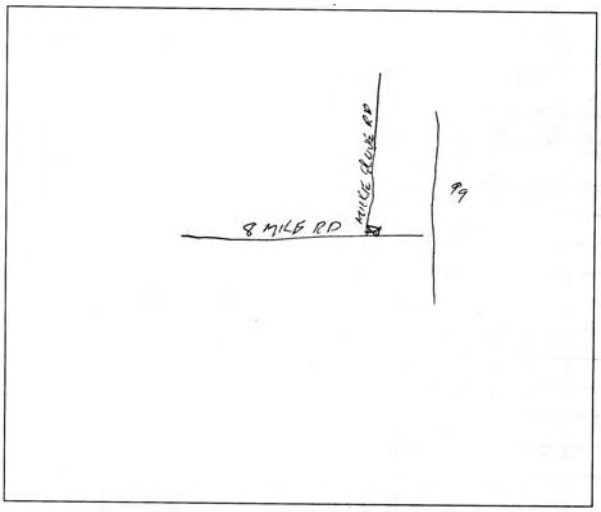

Kettleman Ln
TAYLOR RD
Annex to City R-1 or R-2
Vine St
Mills
Lower Sac
Lodi Ave
High School
Elm St
Turner

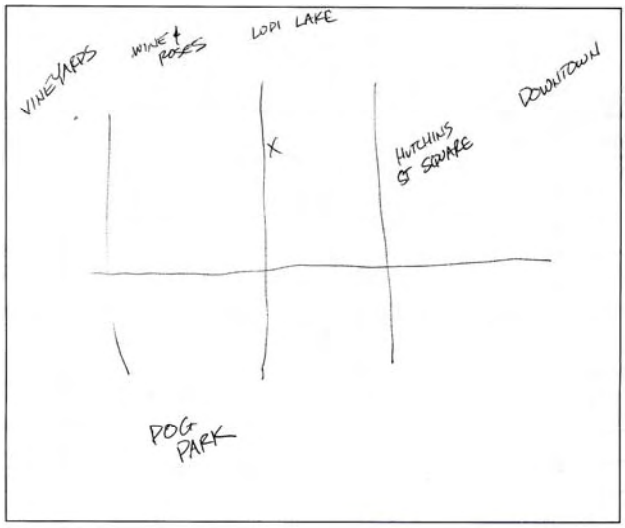
West Side

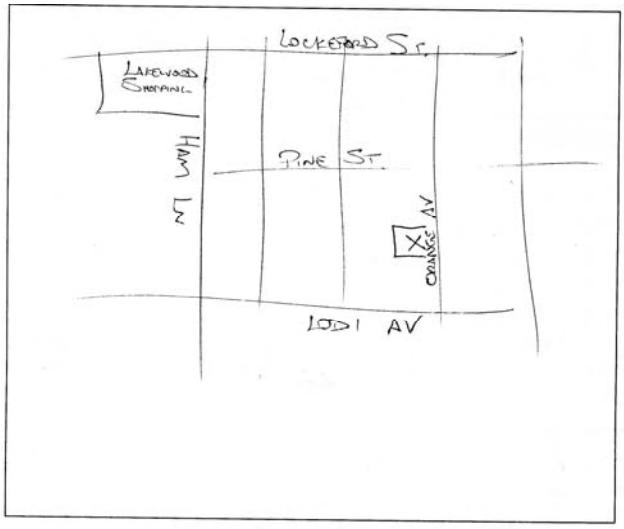


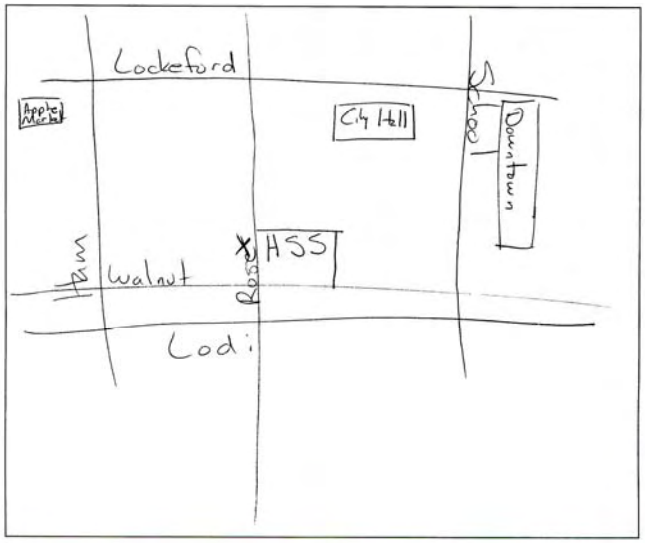


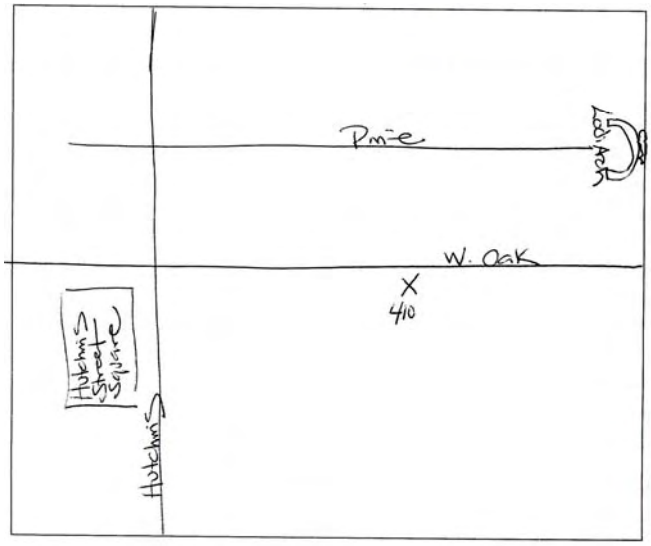


Far South

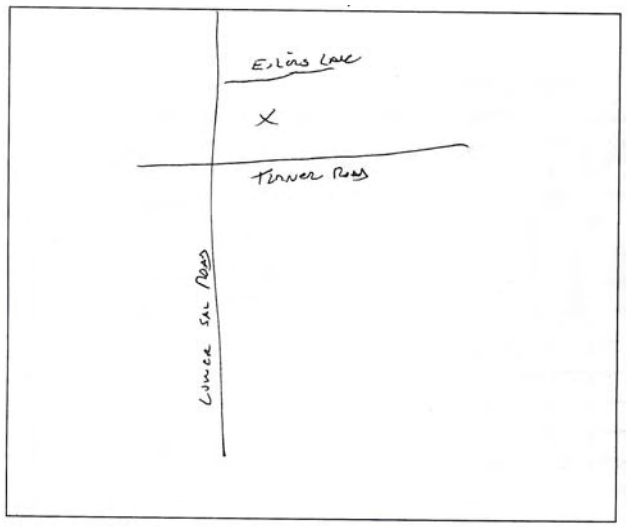


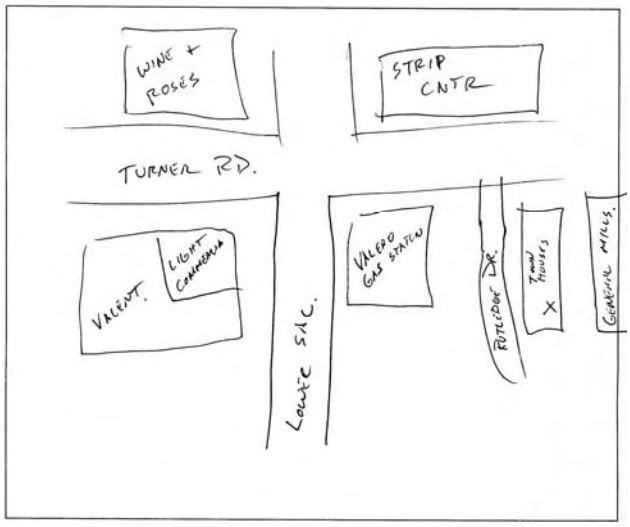


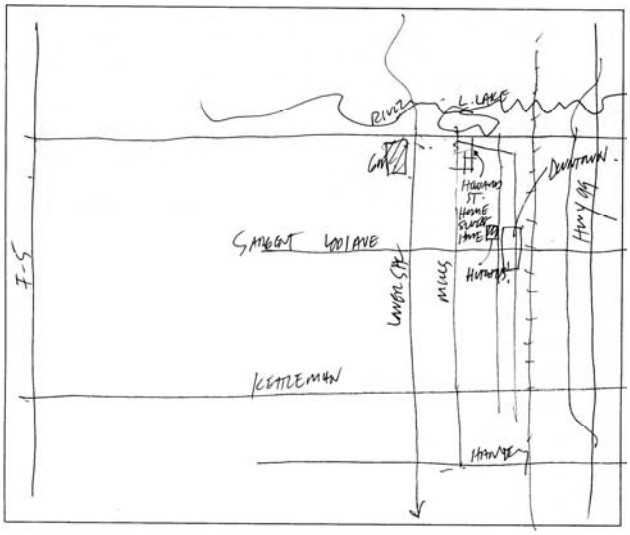


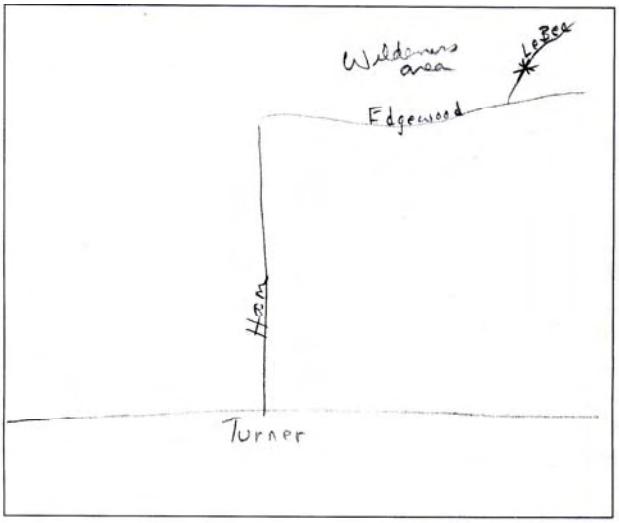


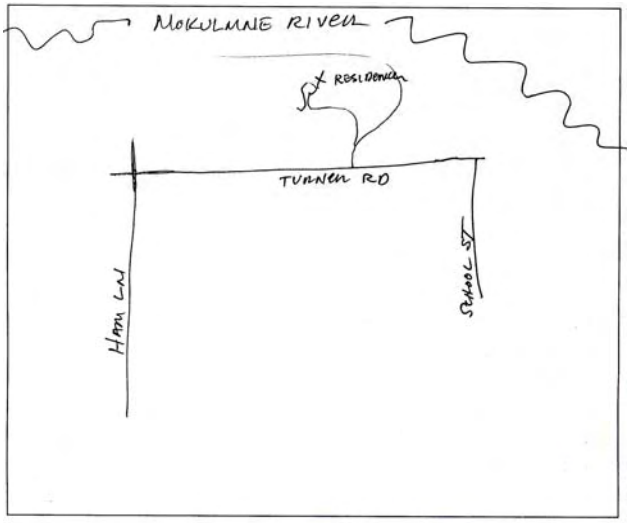
Hutchins Street Square Area

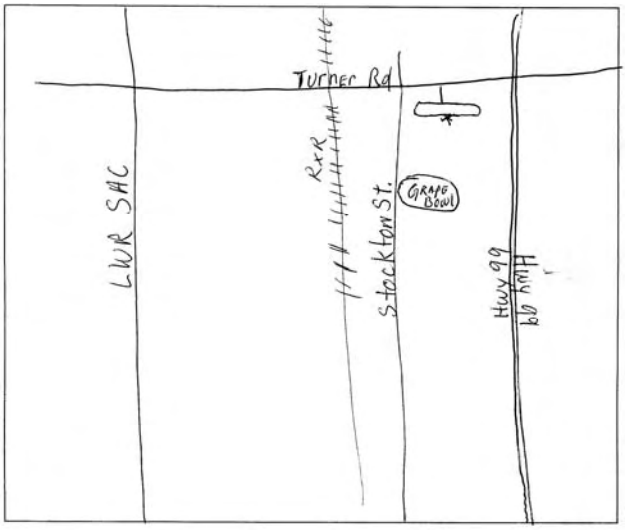




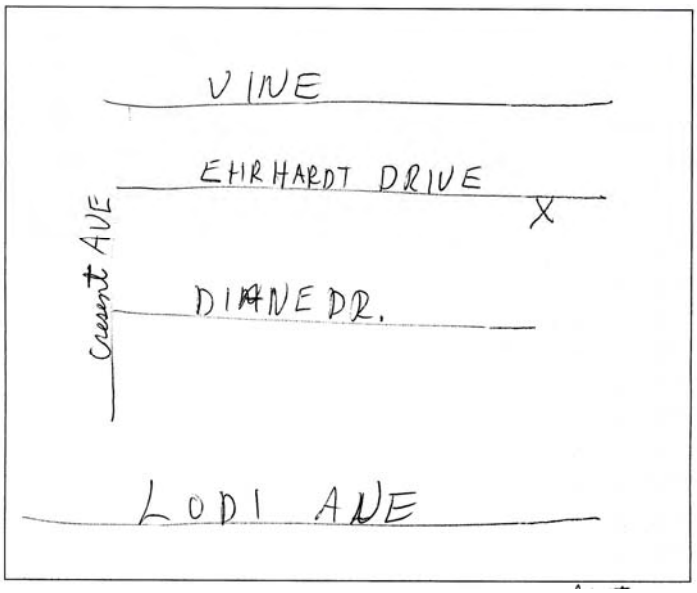


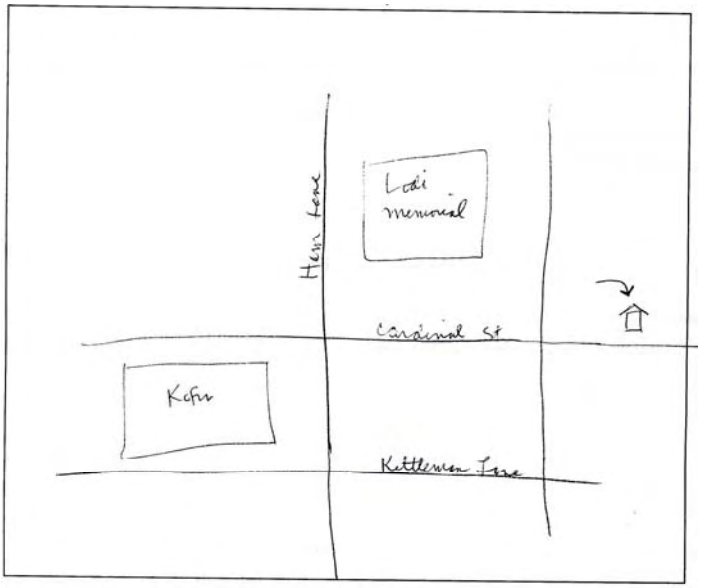




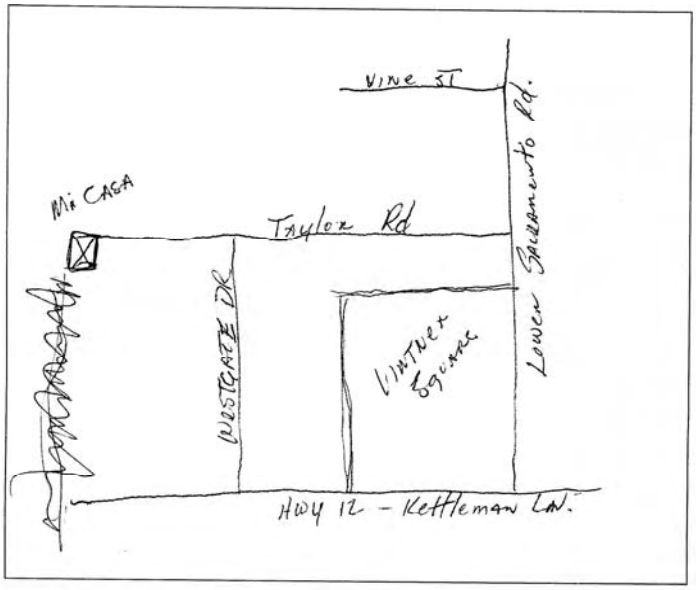


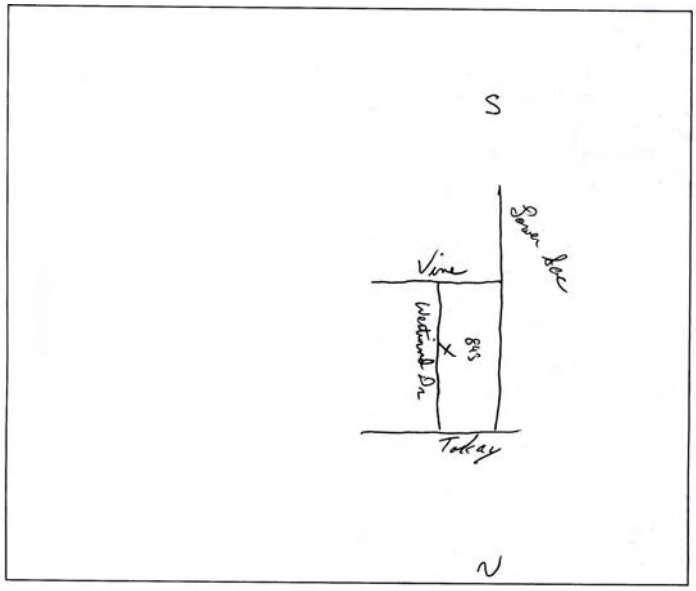
Northern Tier

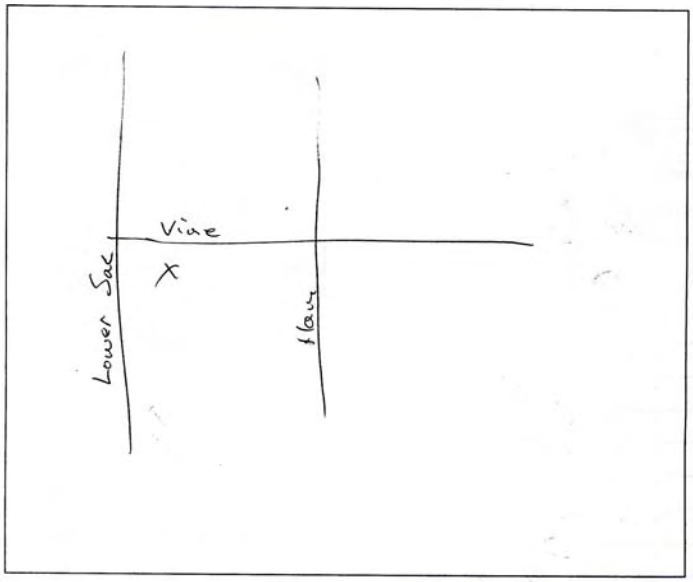


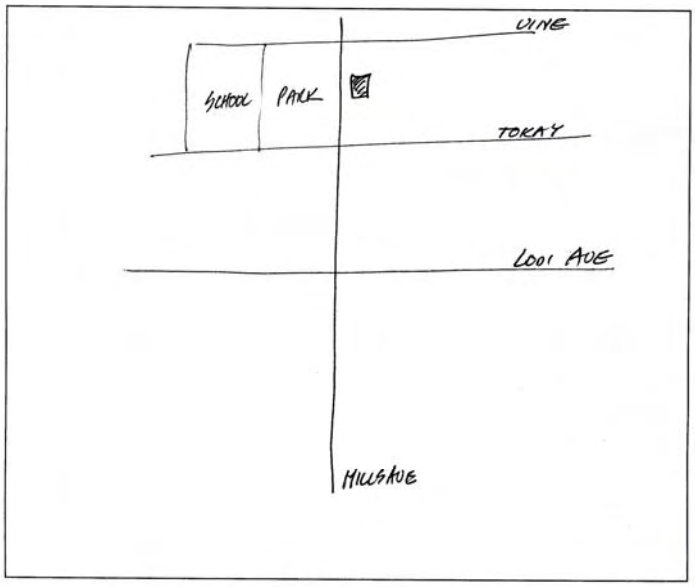


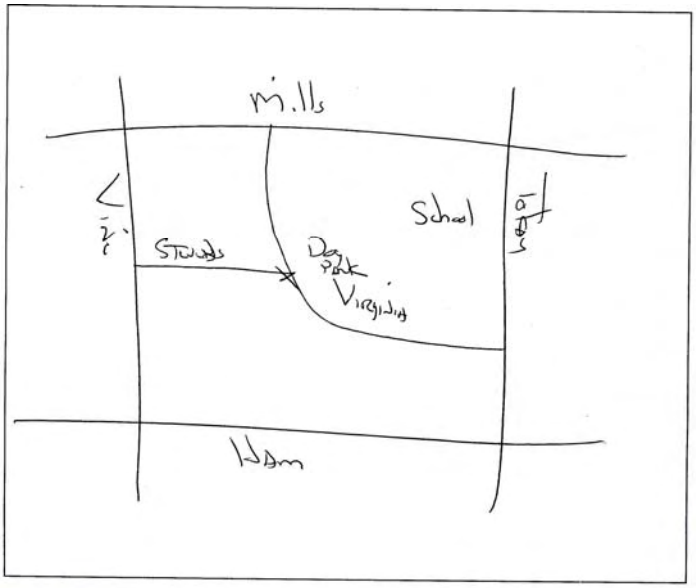
South-Central

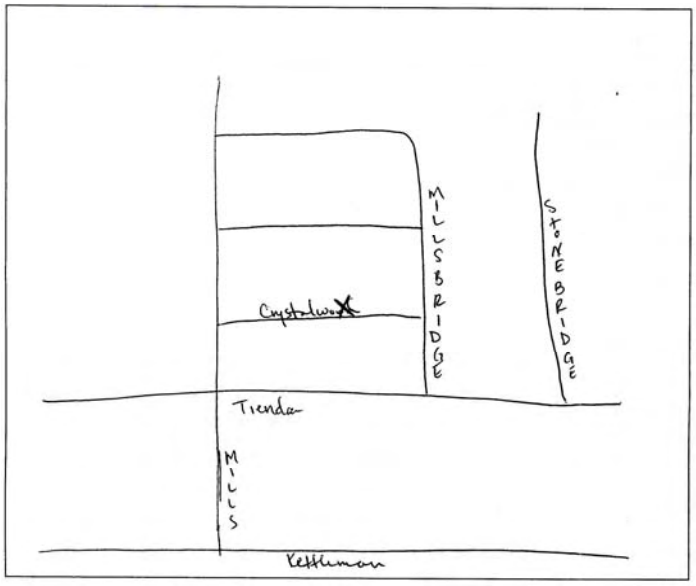

Vine St
Mi CASA
Taylor Rd
Lower Sacramento Rd.
WESTGATE DR
LINTNER Square
HWY 12 - Kettleman LN.


S
Vine
Lower Sac
Westgate Dr
Today
N


Vine
Lower Sac
Hwy 12


VINE
SCHOOL
PARK
TOKAY
LODI AVE
MILLS AVE


mills
Vine
School
Lodi
STUBBS
Dog Park
Virginia
Hwy

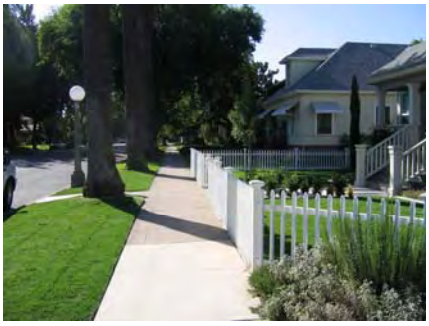

MILLSBRIDGE
STONEBRIDGE
Crystalwood
Tienda
MILLS
Kettleman

Southwest

What would they do to improve their neighborhood?

Many residents are so pleased with their neighborhood they want no changes. A number mention sidewalk maintenance, landscaping, street trees, or street repairs. Residents of two outlying areas would like more police patrols to combat gang problems.

Street trees are considered important in many neighborhoods. Pedestrian and bicycle access is desired including trails along the Mokelumne River and through nature areas.



Central Lodi has many sidewalk and streets that support walking and bicycling.

How attractive do they feel their neighborhood sidewalks and streets are?

Appearance of streets is one of the highest valued qualities in Lodi (4.7). Survey respondents were generally quite satisfied with the attractiveness of sidewalks and streets in their neighborhoods (an average rating of 4.0). Several residents of outlying neighborhoods were dissatisfied.

How satisfied are residents with their neighborhood as a place for walking and bicycling?

Walkability of neighborhoods is rated as being very important (4.5 average) and respondents also rate their neighborhoods as very walkable (4.5). They value bicycle access somewhat lower (3.8) and also give their neighborhoods somewhat lower ratings for this (3.8).

Is automobile traffic a problem for pedestrians and bicyclists in neighborhoods?

Wide arterial streets, many with sound walls, discourage pedestrian use and are difficult to

Respondents do not consider automobile traffic a particular problem for pedestrians and bicyclists in their neighborhoods (3.7 average), and they value protection from such traffic quite highly (4.0 average).

Is noise a problem in neighborhoods?

Quiet is a valued neighborhood quality (4.1 average), but respondents feel that noise is not a major problem in their neighborhoods (3.8 average).

How safe do they feel their neighborhood is?

Neighborhood safety is highly valued (4.7 average). In terms of perceived safety, survey respondents feel positive, but not strongly in agreement, with an average rating of 3.9. A few respondents ranked their neighborhoods very unsafe, pulling down the average satisfaction level. Everyone else rated their neighborhoods very safe.

Conclusion

Lodi has reached the 21st century as a very successful city in terms of most attributes of livability. The few areas in which its residents perceive a shortfall include greenbelt protection around the city's perimeter, preservation and reuse of historic buildings, and safety issues in a few neighborhoods.

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4 Neighborhood Scale and Design

There are two significant areas where urban design directly affects livability: the public realm, such as streetscapes and parks, and the scale and design of an entire neighborhood.

The former issue includes elements such as trees and landscaping, sidewalks (which are affected by width, materials, pervasiveness, and maintenance), street width, bike lanes, street parking, the presence and appearance of parks, etc. The main area where the City has strongly influenced the public realm is in downtown, where a streetscape and beautification plan has recently been implemented in order to draw in more shoppers, enhance walkability, and promote new businesses. The community survey results reviewed in Chapter 3 suggest that residents are largely content with the look and feel of the public realm in Lodi.

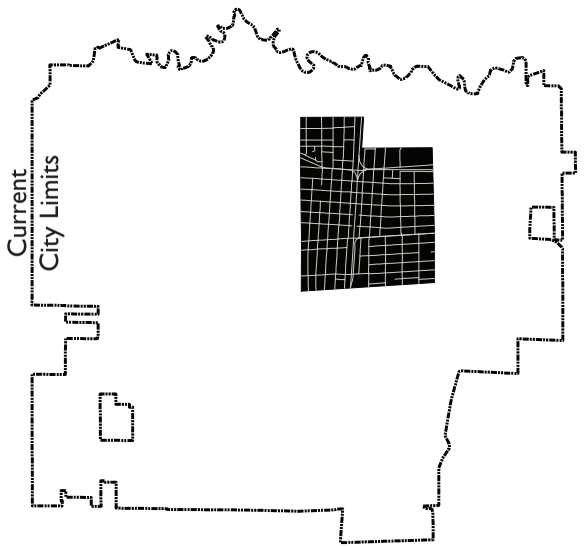
This chapter discusses the latter issue, neighborhood scale and design, which is a concept perceived differently based on people's expectations and experiences. It is affected by factors such as citywide structure, architecture and site layout, connectivity, density, and overall neighborhood structure.

4.1 CITYWIDE STRUCTURE

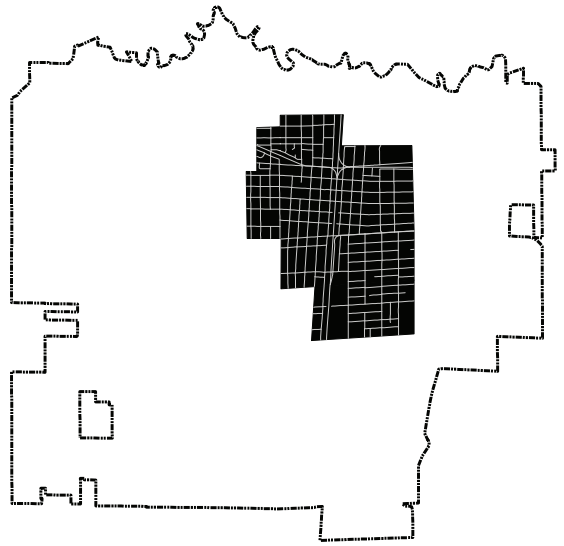
Figure 4-1 shows how Lodi's city limits have expanded over time. The graphic provides a snapshot of the city's size, shape, and street pattern in 1900, 1930, 1960, 1980, and 2000. While the pace of annexation appears to have quickened somewhat since 1980, Lodi has generally grown at a consistent pace, adding land to accommodate new growth on its southern and western edges, in particular. However, growth has happened on all sides of the city core and as a result downtown and Old Lodi remain close to the geographic center of the city, but from increasing distances from neighborhoods at the western and northern edges. The city has also maintained a generally square structure and lacks major obstacles or boundaries within its borders, with the exception of the railroad tracks. Finally, large areas have not been skipped as the city has expanded—the urbanized area has generally remained contiguous.

These factors make Lodi a fairly coherent and easily navigable geographic concept. All parts of the city can be easily reached by traveling on its arterial street grid and distances within the city—particularly to downtown—are minimized. Furthermore, the city's built form consists of belts of development agglomerating onto a central core. As development patterns and architectural styles tend to be similar during the same era, Lodi is made up of fairly uniform "belts" of neighborhoods radiating from the downtown. Consequently, Lodi's neighborhoods possess consistent urban design and livability qualities without significant disruptions.

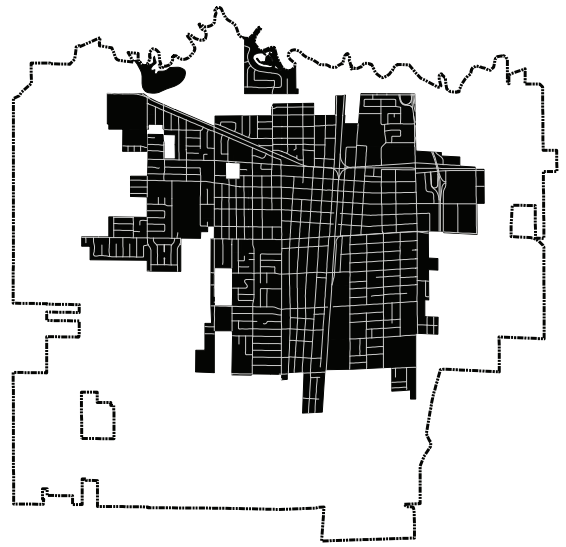
Figure 4-I
Lodi Annexation Growth



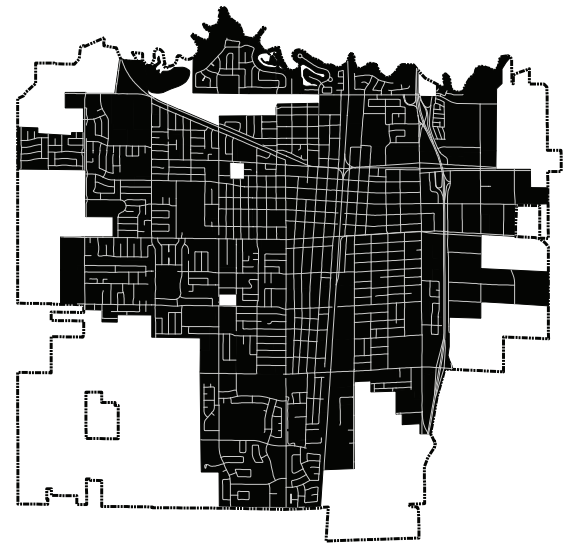
c. 1900
Original City Limits



c. 1930
City Limits



c. 1960
City Limits



c. 1980
City Limits

c. 2000
City Limits

4.2 ARCHITECTURE AND SITE DESIGN

Architecture and site design is difficult to examine at a citywide level, as these factors largely affect a particular lot or street. In addition to building style, building materials and setbacks from the public right-of-way are other factors with can affect sense of urban design and livability. Ideally the application of building materials and setback distances and uses is consistent along a block or within a neighborhood. Setbacks also need to be maintained, particular if they are largely vegetated. These elements provide the subtle visual clues that people react to when judging a community's livability—its wealth, sense of social cohesion, and lifestyle.

Lodi's neighborhoods are largely consistent in their architecture and site design, with downtown, Old Lodi, and the newer residential areas each featuring a similar look throughout their boundaries. The Eastside may be the main exception to this situation, given the variety of residential densities and differing land uses mixed throughout that area.

The city's large-scale commercial uses located along arterial streets, however, lack a sense of unity with their surroundings. Frequent curb cuts, inconsistent setback distances, and the dominance of parking lots create a jarring visual break from residential uses and from one another. The large building bulk of regional retail structures and the vast parking lots around them are particularly out of place with the small scale and vegetated nature of Lodi. As a result, besides downtown, the commercial districts of Lodi and in particular Kettleman Lane convey a sense of practicality that emphasizes convenience over quality.

4.3 DENSITY

Density—or the number of people or housing units in a given area—and intensity—measured as the amount on floor space in a given area—are key determinants of how many people live and work in an area. It is therefore a fundamental topic for land use planning and has a significant impact on livability. The appearance of neighborhoods, distribution of jobs and services, and distances between destinations are all affected by density.

IMPACT OF DENSITY ON LIVABILITY

Density can have an affect on neighborhood scale and design based on the different appearance and resources they provide. Greater density can provide a greater concentration of people, lending itself to neighborhood commercial uses, parks, and schools within a short distance of housing. Lower density can provide more private open space and greenery such as lawns, as well as reduced traffic congestion and more quiet.

However, livability is ultimately affected by how density is treated. Very dense development—such as the brownstones of New York City or San Francisco's victorians—are treasured due to the quality and consistency of their architecture, as well as the ample street trees and short blocks which make walking easy and enjoyable. High density housing can also be seen in large, impersonal apartment towers that deaden the street. In comparison, lower density can mean leafy, quiet subdivisions with large houses, or it can mean strip mall developments fronted by large parking lots.

In addition, all development must address community needs for parking, provide adequately sized housing units, and enable the development of accessible public open space. Meeting these requirements requires neighborhoods to be thoughtfully planned and structured.

MEASURING DENSITY/INTENSITY

The density of residential uses is measured by housing units per acre. Residential density is an imperfect measurement and does not necessarily equate population density. A single family house counts as one housing unit, as does a studio apartment, no matter how many people live in them. Single family homes are usually developed at a density from less than one unit per acre up to 8 units per acre.

The intensity of non-residential land uses are measured by floor-to-area ratio, or FAR, obtained by dividing a site's total enclosed floor area by the parcel size. Thus, a two-story building covering all of a parcel would have an FAR of 2 .0, as would a four-story building covering half the site.

Density/intensity calculations are based on entire sites, rather than a single structure on a site, because the site area is one of the two key variables that determine density/intensity. This makes it difficult to compare individual buildings, since peripheral factors then come into account. For example, the generally low intensity of regional shopping centers reflects the large amount of parking surrounding those buildings.

FAR and dwelling units per acre also leave out many qualitative aspects of a development. Neither conveys the amount of open space available on a site. For example, two projects can each have an FAR of 1.0, but one could be a one-story building with full lot coverage while the other could be a two story structure that leaves half of the parcel as open green space. Even lot coverage, as a measure, does not distinguish between accessible landscaped space and a parking lot. Furthermore, neither measure expresses the experience of living or working in or near the structure, which is shaped by parking availability, the size of dwelling units, circulation, noise abatement, and other site-specific factors.

Building height is usually related to density but does not directly affect it. It is possible to have very tall buildings of only moderate intensity and

low-rise but high-intensity development. Ultimately density is affected by a combination of lot coverage and building bulk. Small lots tend to result in denser development because buildings need to be some minimal size. As a result, older neighborhoods such as Old Lodi, as well as much of San Francisco and Oakland, are both highly dense and low-to-medium height in nature.

CITYWIDE DENSITY PATTERNS

Lodi is generally a low density city, as demonstrated on Figure 4-2. The city has a spine of moderate intensity commercial buildings on either side of the north-south railroad, bounded by medium density housing. Otherwise Lodi's residential and commercial uses are developed at a low density, with the exception of a few higher density housing developments in city and some higher intensity commercial uses along Lodi Avenue, between downtown and Ham Lane.

The use of "high," "moderate," and "low" density is applied relatively. In an absolute sense, no development in Lodi has the high densities or intensities that are found in the San Francisco metro area, Sacramento, or even portions of Stockton. This is a result of the city's low-rise form and the relatively large parcel sizes. However, the city does have a consistent density and as a result is not left with many sections within its urbanized area which are significantly underdeveloped in comparison to their surroundings.

Residential land in Lodi is generally developed at the low density of 0 to 8 units per acre, which equates to single family detached homes on a variety of lot sizes. These densities are fairly consistent across the city's neighborhoods, with development at the urban fringes sometimes ranging from 4 to 6 units per acre, as discussed in the comparative analysis below. The main exception to this pattern is found in the older, gridded sections of Lodi—particularly the Eastside—where smaller parcels result in an overall medium density. Pockets of medium to high density housing can be found to the south of Kettleman Lane near Mallard Lake and off of West Lane.

Non-residential development in Lodi tends to be low intensity, generally with FARs below 0.45. Public uses, such as schools, are usually low intensity since much of their acreage is used for playfields and parking. The commercial uses along Kettleman Lane and Ham Lane achieve moderate intensities—while these are often large buildings, especially at the intersection of Kettleman and Lower Sacramento Road, they are on very large parcels devoted primarily to surface parking. Several of the industrial uses east of the railroad have a moderate intensity between 0.45 and 0.74 FAR, as do some of the commercial uses along Lodi Avenue. The only high intensity areas are to be found in downtown along School and Sacramento streets.

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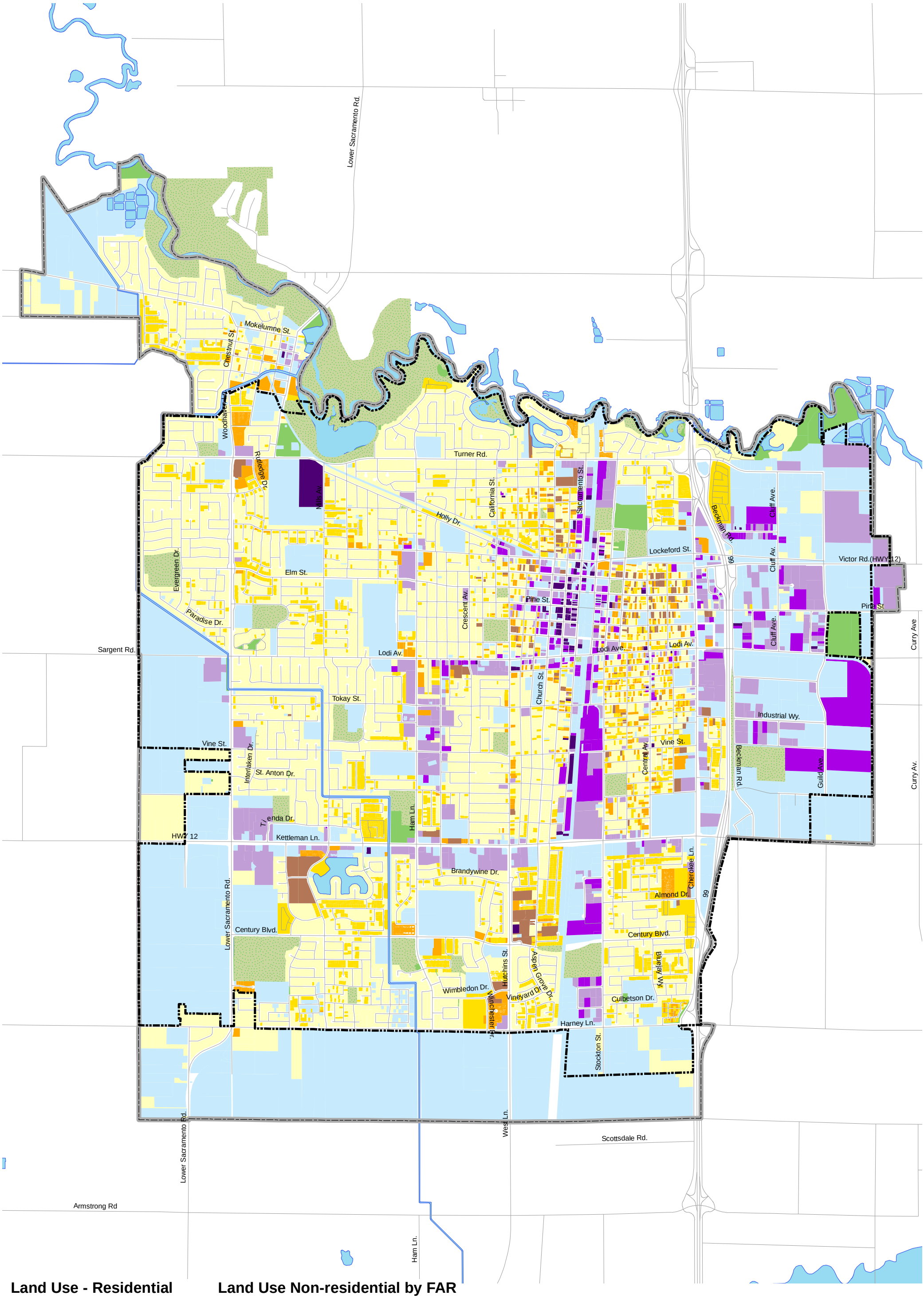

Land Use - Residential

- Lo-dens resid (LD) 0-8 du/ac
- Med-dens resid (MD) 8-15 du/ac
- Hi-dens resid (HD) 15-25 du/ac
- Very hi-dens resid (VHD) 25+ du/ac
- City Limits
- Parks

Land Use Non-residential by FAR

- 0.00 - 0.19
- 0.20 - 0.44
- 0.45 - 0.74
- > 0.75
- Lodi SOI
- Open Space (OS)

September 2007

DYETT & BHATIA
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0 0.5 1 Miles

Figure 4-2

City of Lodi
Existing Development Densities and Intensities

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Examples of Density and Intensity Ranges in Lodi

Low density residential: 0-8 dwelling units per acre (Southwestern Lodi)

Medium density residential: 8-15 dwelling units per acre (West Lodi)

Medium-high residential density: 15-25 dwelling units per acre (Old Lodi)

High residential density: More than 25 dwelling units per acre (Southwestern Lodi)

Examples of Density and Intensity Ranges in Lodi (continued)

Non-Residential Low Intensity 0-0.2 FAR (East of Rail Road)

Non-Residential Medium Intensity 0.2-0.44 FAR (Ketlleman Lane)

Non-Residential Medium High Intensity 0.45-0.74 FAR (East Side, Guld Avenue)

Non-Residential High Intensity +0.75 FAR (Downtown Lodi)

4.4 CONNECTIVITY

Neighborhoods can be assessed by their internal and external connectivity. The former involves how easy it easy to get from point to point within a relatively small, defined area. External connectivity is how well an area can access, and be accessed, by the city's street network, land uses, residents, and visitors.

Internal

The number of intersections is a good indication of a neighborhood's internal level of accessibility. A higher number of intersections translate to greater availability of options for travel within the neighborhood. Conversely, a lower number of intersections can focus traffic on higher capacity collector streets, reducing options for travel through a neighborhood and increasing the amount of through traffic on some residential streets. Furthermore, intersections should be distributed evenly if possible, to avoid long blocks and indirect routes which may lengthen travel time and distance, as well as overly frequent intersections which may impede traffic flow.

Internal connectivity is also enhanced by through-streets, which provide accessibility by traversing the length of a neighborhood, readily connecting side streets with other parts of the city and preventing a development from becoming a barrier to longer trips within the city. The number of through streets within a residential area indicates the relative ease with which one can travel to and from the neighborhood. Through-streets are most common in the downtown and older areas such as Old Lodi and the Eastside.

Internal connectivity is explored further in the neighborhood structure section below.

External

The number of external access points also represents a neighborhood's level of connectivity. Three-way intersections provide neighborhood access to the citywide street network. However, as this access point does connect with an access point from an adjacent, a three-way intersection does not facilitate a direct link with another part of the city. A neighborhood wholly linked to surrounding arterials by three-way intersections is like an island within the city—no other neighborhood directly connects to it and it breaks up the usefulness of traversing across the city on smaller streets. The implications are that while local street traffic will be lower, traffic will be intensified on a small number of arterials, key intersections may become congested because no alternative routes are available, and travel distances become indirect and therefore longer so people will choose to drive rather than walk or bike—also increasing traffic volumes.

In comparison, four-way intersections allow people to travel from one neighborhood directly to another. These are the most important connections because they permit the shortest routes between destinations, thereby enabling walking and biking, and engender a sense of a bigger community.

Figure 4-3 shows the location of three- and four-way intersections along the major roads of the city. Intersections on major arterials and highways are not shown, since these roads are wide and busy and so serve as significant barriers to crossings by local traffic, pedestrians, and cars. The map excludes access points by roads with no outlets, since these do nothing to serve a greater connectivity. As a result, intersections by cul-de-sacs and loop roads are not marked.

As the figure demonstrates, the older grid-based neighborhoods of downtown, Old Lodi, and the Eastside have the greatest number of access points, almost all of which are four-way intersections. These parts of the city are the most inter-connected—it is easy to travel from one location to another and neighborhoods link easily into one another. The areas immediately outside of these neighborhoods see a drop-off in the frequency of four-way connections but still have many three-way intersections, so at least these neighborhoods can easily access the wider city.

However, the parts of Lodi that are west of Ham Lane or south of Kettleman Street have a noticeably different character than the rest of the city. Access points of any types are infrequent, with only two or three occurring every half mile. With only a few exceptions, the only four-way intersections in these areas are where major roads cross. As a result, the neighborhoods in these areas function as islands, separated from the rest of the city and impeding easy connections between adjacent areas.

One positive trend is that new development at the fringes of the city limits is showing increased access to the citywide street network. Figure 4-3 shows an increased frequency of three-way intersections in the areas south of Century Boulevard and west of Lower Sacramento Road.

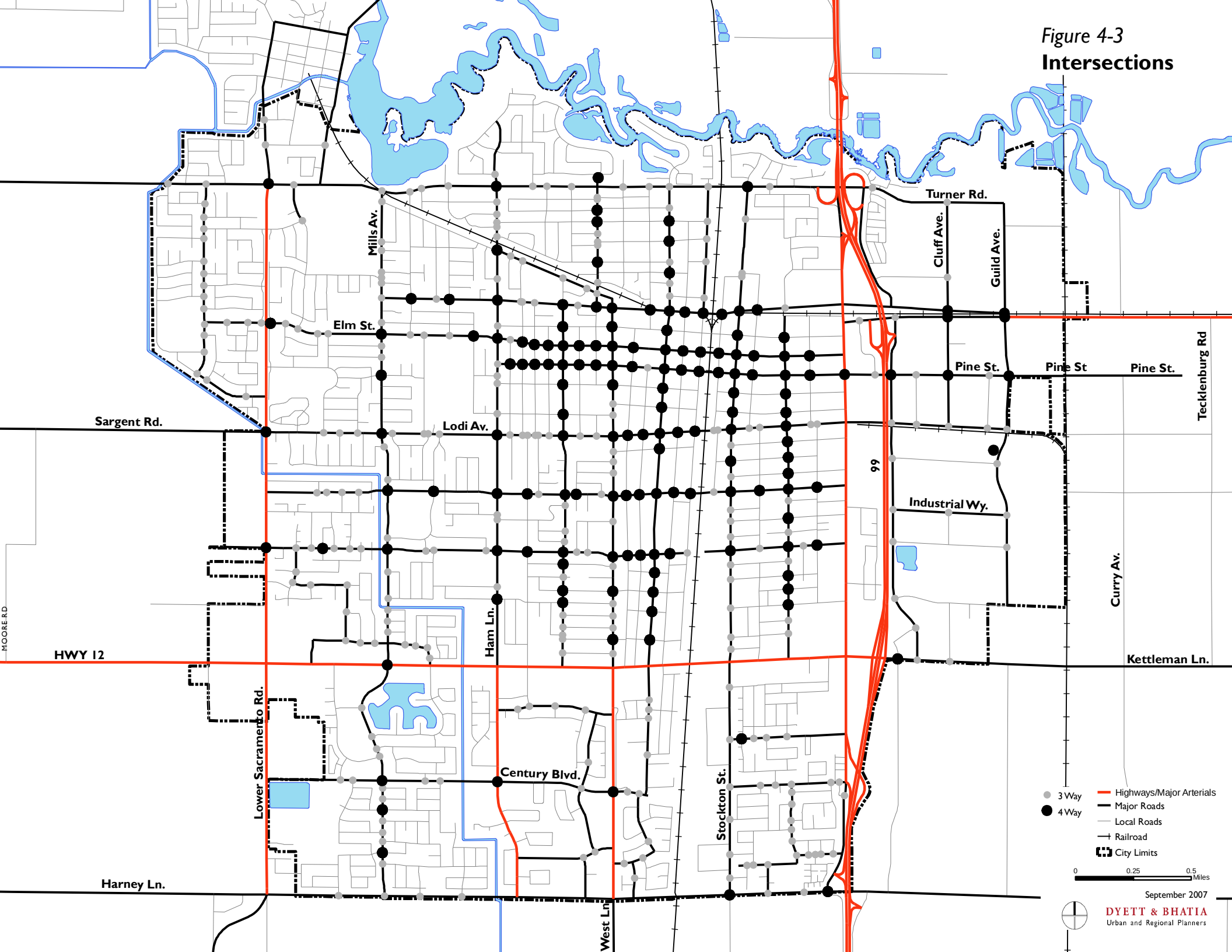
Figure 4-3
Intersections
Turner Rd.
Mills Av.
Cluff Ave.
Guild Ave.
Elm St.
Pine St.
Pine St
Pine St.
Tecklenburg Rd
Sargent Rd.
Lodi Av.
99
Industrial Wy.
Curry Av.
Ham Ln.
HWY 12
Kettleman Ln.
Lower Sacramento Rd.
Century Blvd.
Stockton St.
Harney Ln.
West Ln
MOORE R.D
3 Way
4 Way
Highways/Major Arterials
Major Roads
Local Roads
Railroad
City Limits
0
0.25
0.5
Miles
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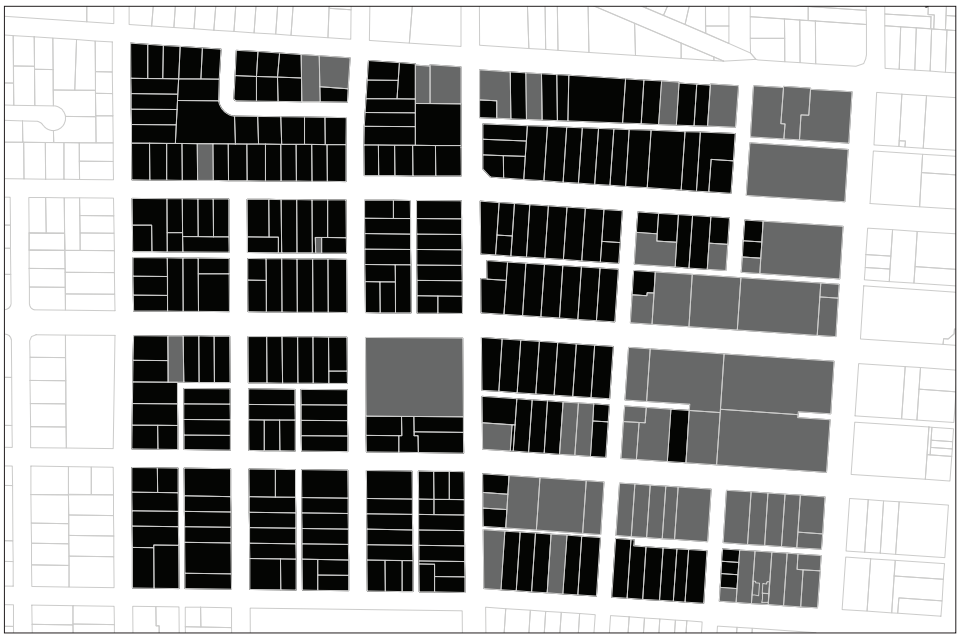
Figure 4-4: Neighborhood Scale and Structure Comparison

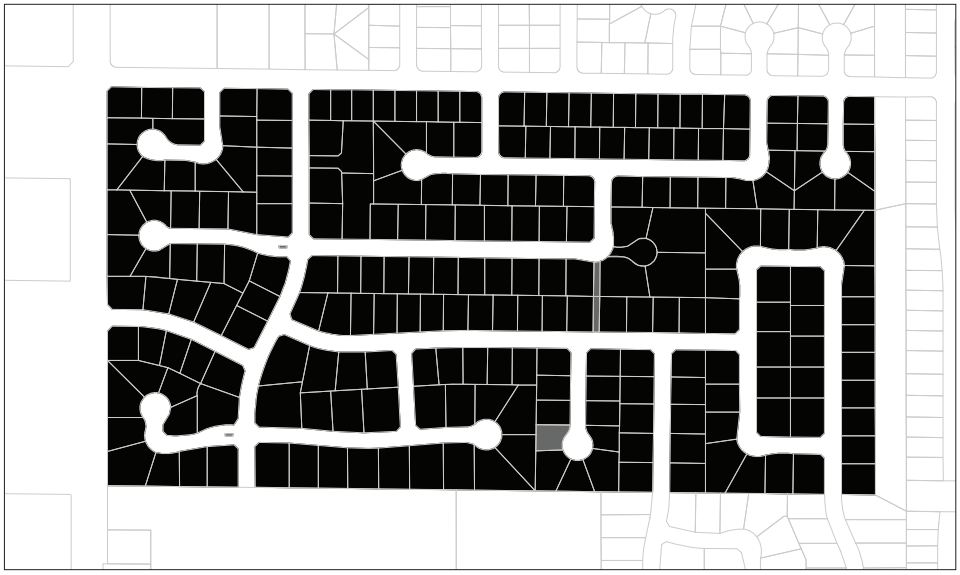


A

Grid (Old Lodi)

44 acres

7,500 s.f. average pa rcel size

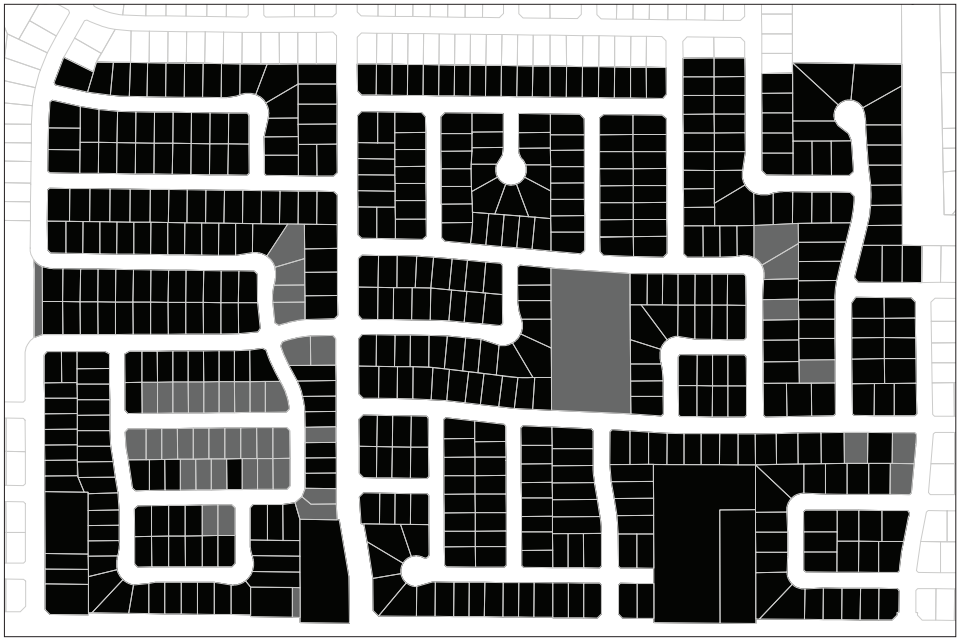


B

Cu rvilinear with Cul-de-sacs
(Sunwest)

58 acres

11,000 s.f. average pa rcel size



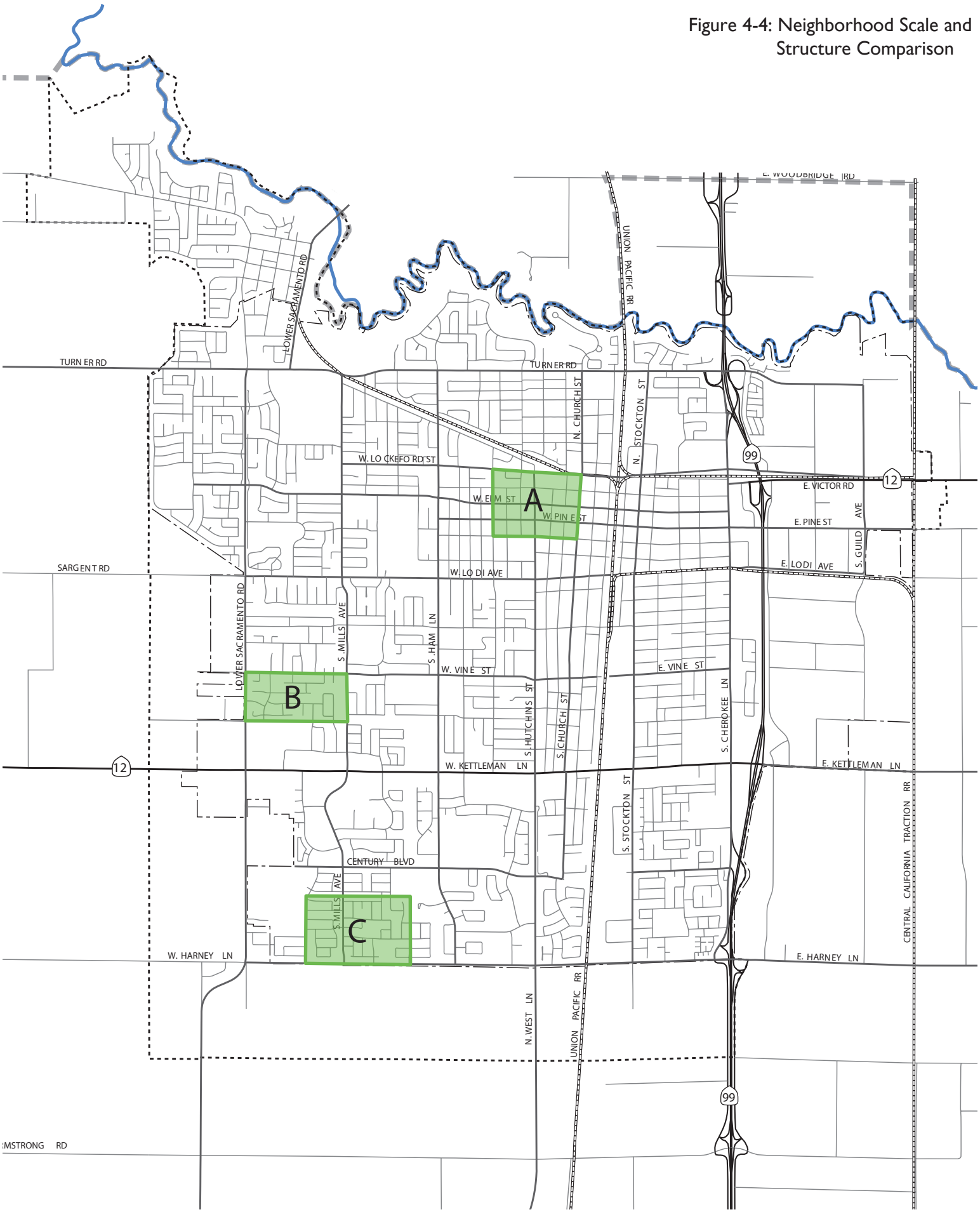
C

Semi-Gridded
(Centu ry Meadows/Legacy Esates)

79 acres

6,850 s.f. average pa rcel size

Figure 4-4: Neighborhood Scale and Structure Comparison



4.5 NEIGHBORHOOD STRUCTURE

In addition to building height and mass, as well as architecture, the scale and structure of a neighborhood play a huge role in defining sense of place and lifestyle. Short blocks, small parcels, and gridded streets all lend themselves to walkability. Long blocks and large parcels are hallmarks of large scale commercial development—encouraging convenient and accessible retail and office development, but requiring automobiles to get around. Cul-de-sacs and non-gridded streets—such as those that curve or jog rather than connect at four-way intersections—can create a sense of privacy and safety but separate an area from the broader city.

Almost half of the land in Lodi is residential in nature, while less than seven percent of it is made of commercial uses. The only non-residential parts of Lodi that are notable in size and profile are the Downtown commercial district and the industrial Eastside, which are singular areas unlike the rest of the city. With new commercial uses being developed along major roads and at intersections rather than in clustered settings, an analysis of the past and future neighborhoods of Lodi must focus on the city's residential areas, which truly give Lodi its internal identity.

Lodi generally exhibits three types of residential neighborhood scale and structure, which roughly correspond to different eras of development:

- Grid
- Curvilinear
- Semi-gridded

In Lodi these neighborhoods are fairly homogeneous in their nature, rarely exhibiting a mix of land uses, parcel sizes, or street types.

COMPARATIVE ANALYSIS

Three Lodi neighborhoods, representative of these development patterns, were selected for comparative analysis. This analysis gives the city an opportunity to assess its diverse neighborhood pattern and to determine the types of urban forms and development styles it may wish to encourage as Lodi continues to evolve.

Grid—Old Lodi

A grid pattern was established from the city's beginning in the 19th century and expanded from what is now the Downtown. In general, a grid pattern exists in the Old Lodi area east of Ham Lane, south of Turner Road, west of the railroad, and north of Lodi Avenue. The Eastside is another gridded area, south of Lockeford Street, west of Cherokee Lane, north of Kettleman Lane, and east of the railroad.

The analysis area shown in Figure 4-4A lies between Lockeford Street, Church Street, Lodi Avenue, and Crescent Avenue. The average size of the parcels in the Grid example is around 7,500 square feet. For single family homes, this equates to a residential density of 5.8 housing units per acre.

The short interconnecting blocks of Old Lodi predate the automobile and provide tremendous flexibility and choice in moving through the neighborhood. A pedestrian would generally walk 300 feet between intersections and rarely go more than 400 feet without a break in the block. These short blocks make it easy for pedestrians or people on bikes to easily get from one house to another. The non-residential uses within the analysis area includes a public park roughly 1.7 acres in size, and the stores, offices, government uses, and parking of downtown Lodi on the eastern edge. The housing in the analysis area is generally within 1/3 of a mile or less of all these commercial uses—easily within walking distance, making the neighborhood much closer to retail than any other residential area in the city.

As the figure shows, the blocks come both with and without alleyways. Alleys allow garages and public utilities and services to be accessed away from the main road, thereby reducing noise, visual clutter, and traffic congestion.

Curvilinear—Sunwest

The curvilinear neighborhood structure was the dominant style for residential development in Lodi from the 1960s through the 1980s. In addition to the Sunwest project, other curvilinear areas include the Edgewood neighborhood between Turner Road and the river, and Beckman Ranch and its adjacent areas. The analysis area in Figure 4-4B is located between Lower Sacramento Road, Vine Street, the canal, and a row of parcel lines that run continuous to Taylor Road.

The average size of the parcels in the curvilinear example is around 11,000 square feet—almost 50 percent larger than the lots in Old Lodi. For single family homes, this equates to a residential density of 4.0 housing units per acre.

The curvilinear structure consists of cul-de-sacs and long blocks. In the case of Sunwest, the streets are generally straight but this neighborhood type frequently has curved streets meant to slow cars and convey a more organic feeling than a grid—this can be seen in Edgewood. This structure lends itself to greater privacy and less cut-through traffic. However, it largely removes these 58 acres of the city from easy access by other residents.

There are relatively few access points into Sunwest—although that is due in part to the canal along its Eastside—and only one road that travels through the entire neighborhood. Restricting the outside access to the neighborhood increases the personal aspect of the area, but breaks up the pattern of the city's streets. Multiple curvilinear developments transform a city into a series of residential islands interconnected only by major roadways, with travel distances that can only be covered by driving. Furthermore, restricting the number of access points to the larger street network can create congestion at those few choke points, since traffic cannot easily distribute itself to other intersections.

These limited access points, indirect routes, and long blocks make walking from one house to another an inefficient transportation choice. Furthermore, the entire Sunwest neighborhood lacks any employment or retail uses. Large-scale commercial centers are located within ½ mile of the neighborhood limits, and a small office complex is nearby, but walking to these destinations is not a realistic option for most people. The neighborhood also lacks any public parks or open space within its boundaries, reducing the opportunities for community gatherings and identity.

Semi-gridded—Century Meadows/Legacy Estates

The semi-gridded approach is the latest neighborhood structure seen in Lodi. It is a combination of the other two styles, with more connectivity than a curvilinear design but longer blocks and fewer connections than a true grid. The semi-gridded structure is appears in most of the residential developments built in Lodi beginning in the 1990s, at the southwest, southeast, and northwest corners of the city.

The analysis area shown in Figure 4-4C is located in the Century Meadows/Legacy Estates neighborhood, built in the 2000s. Its boundaries are Providence Way, Poppy Drive, Harney Lane, and Heavenly Way/Legacy Way. The average size of the parcels in the semi-gridded example is around 6,870 square feet, which is actually slightly smaller than the average lots in Old Lodi. For single family homes, this equates to a residential density of 6.3 housing units per acre.

The semi-gridded structure has limited access points to the broader roadway network of the city, but has better internal connectivity than the curvilinear design. Shorter blocks and fewer cul-de-sacs make point-to-

point trips quicker and easier. However, like the curvilinear style, the semi-gridded structure is built without space for non-residential uses—although a park is included in the Century Meadows development—and still creates residential "islands" disconnected from jobs, services, and other neighborhoods.

Other Possible Neighborhood Styles

While the above three neighborhood styles are the dominant structures in Lodi, other scales and structures are possible.

An alternative neighborhood structure street system is the organic structure, which conforms to topographical or natural conditions, or which gradually evolved over many years of development. Organic streets are typically curved and do not offer a very efficient circulation system, but are often well-regarded for their supposedly legitimate and unregimented nature. Many suburban subdivisions, such as curvilinear patterns, attempt to evoke an organic structure. The organic structure is common to European cities, as well as some older American cities such as central Boston. The Rivergate neighborhood, north of Turner Road and just west of the railroad, is a small example of an organic structure as its curved streets are responding to the route of the river.

Another neighborhood structure is a geometric pattern, which could angle local roadways off of larger arterial streets, or focus streets toward a central point such as a landmark or a plaza. No examples of this style can be seen in Lodi. The boulevards of Paris and the street system of Washington, DC are well-known examples of this structure.

In addition, the scale of Lodi's neighborhoods does not embrace the full range of options. Lodi has few to no examples of very small lots (5,000 square feet or smaller) for single family houses or of attached home styles such as townhouses (although these are part of some developments currently underway), and relatively few large apartment buildings. Applying these different lot sizes or housing types would result in a different type of livability and urban design in parts of the city.

IMPACT OF LOT SIZE

In residential neighborhoods, larger parcels allow for more private yards and large homes and can give a more relaxed sense of place. However, in addition to the cost of owning more land, this lower density also takes up more space to house the same number of families.

According to the California Department of Finance, the population of Lodi grew by 10,750 people between 1990 and 2005. Assuming Lodi's average household size of 2.744 people per household, that population growth equates to 3,918 housing units. If all of these households were to

occupy a new single family house, here is how much land the different neighborhood types would require:

- Old Lodi/Grid: 675 acres
- Sunwest/Curvilinear: 990 acres
- Century Meadows/Semi-gridded: 620 acres

These acreages do not include all of the non-residential land the new households require, such as schools, parks, stores, and employment uses.

While density needs to be balanced against issues such as community character, infrastructure, and open space, lower density forms of development will use up more farmland, increase the distances between destinations, and expand both the necessity of and time in cars. However, denser communities that do not readily link into the citywide street network and which lack neighborhood-serving non-residential uses offer only mildly lesser impacts.

RECENT AND PROPOSED DEVELOPMENT

Given the city's consistent and tightly knit urbanized area, almost all of its recent development has occurred on the urban fringe on land annexed to the city. Almost all of this new development has been residential in nature, with the exception of the commercial uses along Kettleman Lane.

The newest residential developments appear to be employing the semi-gridded neighborhood structure, which enables greater internal connectivity. However, new development has not included any gridded street networks and does not connect well to other parts of the city—as Figure 4-3 showed, four-way intersections continue to be largely absent on the urban outskirts. It is worth noting that four-way intersections are possible with any of the neighborhood structures discussed, including the organic style, since they are a factor of where external access points are placed. Recent development continues to be single use in nature, with residential and commercial uses very separated.

Many of the proposed residential development projects, such as Reynolds Ranch, have not finalized their neighborhood structures and street networks. However, Reynolds Ranch will contain a mix of uses within the project area, with office, retail, and residential uses included and relatively close to one another.

5 Accessibility

Accessibility is about how easy it is to reach and use important functions of everyday life and key cultural and social resources. It is driven by the quality, convenience, and effectiveness of connections by different modes of transportation. This in turn is affected by citywide planning strategies—allowable densities, distances between different land uses, the grain of the street network, and expenditure on non-motorized modes of travel such as bike lanes and sidewalks.

This section will define accessibility and review how readily Lodi's residents can reach schools, libraries, parks, the river, shopping, and jobs.

5.1 DEFINING ACCESSIBILITY

In the context of livability and urban design, "accessibility" measures how much time, cost, and energy must be devoted to interacting with, acquiring, or otherwise using vital resources as well as those facilities that enhance quality of life. This accessibility is affected by a number of factors:

- *Travel distance*. Destinations that are a long trip for users require more time, expense, or both, and therefore cannot be accessed as easily or often. In addition, a destination may be difficult to reach due to obstacles like railroad tracks or limited entry points. For example, the riverfront in Lodi has been mentioned as having limited accessibility, due to the few locations where it can be reached by the public.
- *Transportation mode*. Destinations that must be reached by private automobile require an individual to have money and skills that are not shared by everybody. Children, as well as lower-income individuals and people who cannot drive for medical or other reasons cannot access resources that can only be reached by car. Conversely, some people with physical disabilities need a car to get around and cannot access a resource unless it is automobile accessible and parking is convenient.
- *Capacity*. Destinations that can only handle a limited number of people may have low accessibility. A store that has only a few parking spaces or a very small park that gets overcrowded is not very accessible.

For these reasons, urban sprawl—the low-density development at the edge of a city—is considered problematic because of the low accessibility of its development style. Jobs, services, parks, and schools are often great distances from housing and one another and connected by roads that lack bike lanes or sidewalks. This makes cars a necessity for almost all trips,

which results in high levels of traffic, air pollution, and low quality of life for those who cannot drive.

Each of these factors is discussed further below, along with strategies to increase accessibility of key destinations.

TRAVEL DISTANCE

A major of goal of urban planning is to designate land for certain uses that will be convenient for the residents, workers, and visitors in a city, while maintaining other factors in quality of life, such as privacy, quiet, safety, and aesthetics. However, separating land uses can create longer trips from homes to jobs, stores, and public resources like schools and parks. Distance can also be increased by creating an indirect street network which curves and dead ends, requiring roundabout trips to destinations.

Greater distance increases the cost of trips—whether fuel or time. Distance also reduces the effectiveness and desirability of traveling by foot, bike, or transit, thereby requiring travel by car. This is itself a financial investment and leads to demands for more land being devoted to wider streets and to parking lots—transforming more of a city to asphalt rather than green space or buildings. Obligatory travel by automobiles also results in greater traffic congestion, increases air pollution, and reduces the opportunity for serendipitous meetings in public.

Travel distance can be limited by mixing land uses so that all of a person's destinations are in one area, but this approach results in a great deal of traffic and noise, which are usually not desired close to housing. In addition, job centers and retail uses must be supported by a large ratio of residents, so providing a balanced mix of housing, employment, and stores in one place usually requires high-density residential development.

Nodes of non-residential uses may be a more appropriate strategy for reducing travel distance, combining jobs and stores and services so that many needs away from home can be accomplished in a single place. This is the way many urban downtowns function. However, a single location that contains a huge volume of non-residential space may not be convenient for everybody, especially if not centrally located, and may create in significant traffic congestion. Also, purely non-residential areas become empty after business hours—an inefficient use of land at best and a safety issue at worst.

Ultimately, land use planning tries to strategically balance many of these concerns in order to protect residential neighborhoods and promote the best use of land, while supporting livability by keeping travel distances as short as possible.

TRANSPORTATION MODE

A fundamental measure of neighborhood livability is ease of access, especially by foot, bicycle, stroller, and wheelchair to key elements of the neighborhood environment such as schools, parks, local shops and services, cultural facilities, libraries, or transit stops. The layout of the street pattern facilitates or discourages access, especially for pedestrians and bicyclists.

Like bicycling, walking is a "green" mode of transport that not only reduces congestion, but also has low environmental impact, conserving energy without air and noise pollution. Beyond its purely utilitarian value for trips to work, school, or shopping, it can be recreational. Pedestrian transport is also the most socially equitable mode, as it is available to all economic classes and ages. Walkability is the foundation for the sustainable city; without it, meaningful resource conservation will not be possible.

"Walkability" is the extent to which the built environment supports and encourages walking by providing for pedestrian comfort and safety. Connecting people with community destinations requires visual interest in journeys throughout the network. The pedestrian livability or "walkability" of a neighborhood is strongly related to the number of choices one has for moving through a district and the amount of time and effort the journey involves. The number of intersections per acre, and block size are as important as the presence of sidewalks and pedestrian-scaled streets.

Over the past century there has been a steady degradation of pedestrian access in American towns and cities, even in Lodi. Street patterns have evolved from highly interconnected grid patterns with excellent pedestrian access in the town center, to disconnected and closed patterns at the fringe with poor pedestrian connectivity. Walkability has been discarded in favor of high speed transport and a quest for efficiency. Each advance in transportation technology—from horse drawn cart or carriage, to horse drawn streetcar, to electric streetcar, to automobile and superhighway—has degraded the pedestrian environment. Hazardous high-speed traffic broke up the fine-grained pedestrian network and imposed barriers to free movement on foot.

In ignoring the pedestrian experience, the street lost its intimate scale and transparency, and became a mere service road, devoid of public life. Modernist planning and design separated pedestrians from the automobile, shunting them off to raised plazas, skywalks, and sterile pedestrian malls. The automobile-oriented values of Modernism have been codified in the transportation and street design standards that most American cities plan with today.

Like most American cities, Lodi's street pattern has evolved from an interconnected grid in its historic center, to more discontinuous and insular cul-de-sac and loop patterns on the periphery. (© Michael Southworth)

In the late postindustrial city, automobiles swallow ever larger percentages of a community's land area and it has become almost impossible for the pedestrian or bicyclist to navigate freely. The street patterns of most residential areas in the U.S. built after 1950 are based on the discontinuous cul-de-sac or loop pattern rather than the interconnected grid. Block sizes are too large to permit a range of route choices and land use patterns are coarse with activities widely spaced and segregated by type. Streets are often over-scaled and inhospitable to pedestrians and sidewalks are often eliminated in order to cut construction and maintenance costs in an environment engineered exclusively for vehicles.

Why Walk?

The benefits of promoting walking are now recognized. Walking can promote mental and physical health including cardio-vascular fitness, reduced stress, stronger bones, weight control, and mental alertness and creativity. Walking is the most accessible and affordable way to get exercise. As obesity has now become a major public health problem in the U.S. and many studies have made connections between health and urban form. They make a strong case for better design and planning of the pedestrian environment.

- Compared with Europeans, Americans walk very little. Only 9 percent of total trips in the U.S. were by foot in 1990 but 84 percent were by car, whereas in Sweden 39 percent were by foot and 36 percent were by car. In The Netherlands and Germany walking and bicycle trips increase with age and account for over half the trips for people age 75 and older (Pucher and Dijkstra, 2003). Only 6 percent of trips were by foot for Americans age 75 and older in 2000. (Frank et al. 2003).
- Three quarters of U.S. adults do not get enough physical activity. As little as ½ hour of moderate activity such as walking or bicycling may be adequate for long term health, but only one quarter of the U.S. population achieves this (Frank et al. 2003; Powell et al. 2003).
- Nearly two thirds (64.5 percent) of U.S. adults are overweight and almost one third are obese according to a recent National Health and Nutrition Examination Survey (Ewing et al. 2003). In contrast, European countries with the highest rates of walking and bicycling have less obesity, diabetes, and hypertension than the U.S. (Pucher and Dykstra 2003).
- People who live in "sprawl" are likely to walk less, weigh more, and have greater incidence of hypertension than people living in more compact areas (Ewing et al. 2003). Residents of more walkable San Diego neighborhoods engaged in 70 more minutes of physical activity in the previous week and had less obesity; 60 per-

cent of residents in less walkable neighborhoods were overweight (Saelens et al. 2003).

- Women between the ages of 70 and 81 who did more walking and other physical activity tend to have better cognitive function and less cognitive decline than those with less activity. Those with the highest levels of physical activity had 20 per cent lower risk of cognitive impairment (Weuve et al. 2004). Men over 71 who walked the least (less than ¼ mile per day) had nearly twice (1.8 times) the risk of developing dementia as those who walked the most (Abbott et al. 2004).
- People who live in walkable neighborhoods may have higher levels of "social capital," and are more likely to know their neighbors, participate politically, trust others, and be socially engaged (Leyden 2003).

For decades urban designers have advocated more walkable cities but without much success. These recent studies on the many health benefits of walking have helped strengthen the case for building more walkable communities in the U.S.

Criteria for Walkable Lodi

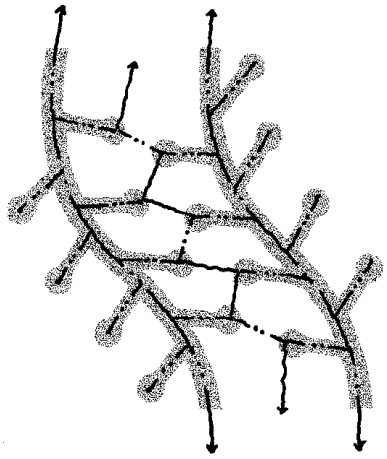
What are the qualities of a walkable city? To encourage walking, Lodi would need to go beyond utilitarian access and address several qualities of the path network.

Path Connectivity

The path network should be well-connected without major gaps or barriers. In addition to path distances to various points, it is important to measure the degree of path choice. A high density of intersections and small block sizes usually correlates with a high degree of connectivity. Barriers to pedestrian access must be minimized.

Connectivity is best addressed when an area is being planned, of course, and is far more difficult to remedy once a place is built. Thus, new development in Lodi, both residential and commercial, requires particular attention. Most of the post-industrial suburban landscape in the U.S. suffers from lack of pedestrian connectivity, typically with a pattern of disconnected cul-de-sacs and barrier arterials and highways. In some cases, connectivity retrofits might be possible, with pedestrian overpasses or underpasses across barriers, or traffic-calming devices. Cul-de-sacs might be connected with walkways to provide a continuous bicycle and pedestrian system.

School Street is very walkable with traffic calming and considerable visual interest.



Connected cul-de-sacs (© Michael Southworth)

Linkage of Movement Systems

Pedestrian paths should be linked seamlessly, without interruptions and hazards, with other modes such as bus or train, thereby minimizing automobile dependence. Walking and bicycling are now seen as essential ingredients in a sustainable transportation system. Providing continuity from home to destination requires more than a fine-grained neighborhood pedestrian network. Connectivity in the larger city and region is needed with convenient and accessible intermodal links. Stops need to be spaced frequently enough to allow pedestrian access for residential and commercial zones, usually ¼ to ½ mile, or a 10 to 20 minute walk. A complete pedestrian network will offer full connectivity between all modes so that one can navigate from foot to bus or train without difficult breaks. A small pedestrian district, no matter how well designed, will contribute little to community sustainability if it is not well supported by transit and situated within an accessible mix of land uses.

Fine Grained Land Use Patterns

Land use patterns need to be fine grained and varied. A walkable neighborhood or city has an accessible pattern of activities to serve daily needs. One can reach a park, school, library, or market on foot within 10 to 20 minutes or up to ½ mile, because these uses are modestly sized, nearby, and can be traveled to via a direct route. By clearly identifying areas that lack adequate service access, policies and plans for improving the situation can be formulated. However, most post-industrial development in the U.S. has lost walkability and the necessary fine-grained pattern of uses, making it is impossible in many areas to reach even one everyday activity on foot within ½ mile.

Studies have indicated that distance to destinations is the single factor that most affects whether people decide to walk or to take the car, and is more of a determinant than weather, physical difficulty, safety or fear of crime. Land use intensity and diversity, like connectivity of the path network, are best established at the very beginning of the development process. Once a low-density coarse-grained pattern is put in place, it is a legal and physical challenge to insert density and variety.

Safety

The pedestrian network needs to be safe for people of varied ages and degrees of mobility, both from traffic hazards and crime. Pedestrian safety is perhaps the best understood and most fully developed aspect of walkability. In most U.S. cities transportation and land use policies have made walking and bicycling inconvenient, unpleasant, and dangerous. Each year 6,000 pedestrians and bicyclists are killed in traffic in the U.S.; pedestrians are 23 times more likely to get killed than automobile passengers.

According to the Lodi Police Department, the city is a safe place for pedestrians. In 2005, the most recent year for which data were available, there was one pedestrian fatality and 25 injuries, which covers conditions from pain reported through visible injuries. Similarly, there were no bicyclist fatalities and 26 injuries. There is no clear geographic pattern to these accidents, although downtown has few accidents. The LPD reports that the pedestrian/bicyclist/car accident rate has gone down over the years in general, which they attribute to stricter enforcement, such as ticketing drivers for not yielding to pedestrians. That said, the police have determined that the majority of collisions are the fault of the pedestrian.[1]

A recent trend across the country has been European-style "traffic calming," techniques for making streets more pedestrian friendly. Vehicular traffic is slowed through a variety of devices: chokers, chicanes, speed bumps, raised crosswalks, narrowed streets, rough paving, traffic diverters, roundabouts, landscaping, and other means.

Auto-oriented retail and services along Cherokee Lane.

In parks and greenways pedestrians are protected from cars, but interacting with the faster moving skateboarders and bicyclists is an annoyance and may even injure them. To prevent skateboard or bicycle conflict with recreational walking, separate path systems can be designed. Straight, smooth surface bike and skateboard paths can be separated from permeable meandering trails for the slower speed of pedestrians.

Paths intended for use after dark require lighting. Harsh overly bright upper story floodlighting works for vehicles but not for pedestrians. Walkers are most comfortable with street level lighting only bright enough to illuminate faces, pavement obstacles and level changes.

Big box retail located along Kettleman Lane.

Path Context

If residents are to choose walking or bicycling over the automobile, the path network must engage the user. The path context, including the street, the architecture and the landscape, needs to offer the pedestrian visual interest and overall explorability. A safe, continuous path network in a monotonous physical setting will not invite pedestrians. Many aspects of the path context can contribute to a positive walking experience: visual interest of the built environment, design of the street as a whole, transparency of fronting structures, visible activity, views, lighting, and street trees and other landscape elements.

The postindustrial city has become an increasingly closed and hidden world as processes of production and marketing are hidden from view.

[1]Phone conversation with Sgt. Steve Carillo of the Lodi Police Department on July 12, 2007.

A local craft industry's foundry is located on Lodi's Eastside.

Utility meters are disguised as folk art on a Kettleman commercial building.

An elaborate mural on Church Street advertises Hutchins Street Square several blocks away.

Big box shopping, introverted shopping malls and office parks, vast parking lots and reliance on electronic communications have all contributed to urban landscapes that are difficult to read. A transparent environment allows one to perceive the social and natural life of a place through first hand observation. Such qualities are impossible to deal with at the abstract scale of most transportation analysis and planning, but require detail design and attention to the special qualities of places. In most large developments of mass-produced housing, repetitive architecture and uniform street layouts devoted to the automobile have produced neighborhoods with little pedestrian appeal. Researchers have found that perceived visual interest along a street is closely correlated with parcel size: streets with smaller lots are visually more engaging than those with large parcels.

Perhaps the least hospitable pedestrian path is the auto-oriented commercial strip, a treeless expanse dominated by several lanes of noisy traffic, polluted air, glaring lights and raucous signs. The street has few, if any, designated crosswalks and is much too wide for a pedestrian to cross comfortably. The chaotic frontage is poorly defined, lined by blank big boxes, large parking lots, and drive-in businesses. Haphazard utility poles, street lights, traffic control signs, hydrants, mail boxes and parking meters dominate the sidewalk, which is constantly interrupted by driveways to businesses.

Path Quality

The character of the path itself affects walkability. It should be continuous, without gaps, and should have a relatively smooth surface without irregularities that could make walking and wheelchair access difficult. The required width varies from single-file woodsy trails to sidewalks that permit two to three people to pass one another or to walk together in groups. Activity centers need broad walkways to accommodate multiple groups moving or congregating. Encroachments into the pedestrian right-of-way such as utility poles, mail boxes, or newspaper vending machines can compromise walkability by introducing visual clutter, constricting the pathway and blocking crossings. Landscape elements such as planted verges help insulate the pedestrian from the moving traffic, and street trees provide protection from the sun and help define the street space. Paving patterns add visual interest and contribute to city identity. Carefully placed fountains, arbors, street art, and paving patterns can add delight to the walk, while sidewalk width, paving, landscaping, signing, and lighting all impact frequency of use. The ideal pedestrian path provides a visually stimulating, safe, and comfortable environment.

CAPACITY

Capacity is not a major issue in Lodi. Commercial uses generally have large parking lots or, in the case of downtown, a parking structure.

Working Paper #2 notes that most of the parks in Lodi were intended to function as neighborhood parks, but because of their location, use, and facilities, have become primarily places for organized sports commonly found in community parks. Thus, surrounding neighborhoods are affected with more noise, light, and traffic, and are provided with fewer passive recreation amenities than intended for neighborhood parks. This is shift in park use away is probably due to the city having only 40 percent of the General Plan's suggested neighborhood and community parks including basins, and 20.5 percent excluding basins. However, it may mean that these neighborhood parks are short of the parking and facilities needed to support the actual use they experience.

5.2 ACCESSIBILITY IN LODI

This section examines how readily Lodi's residents can reach schools, libraries, parks, the river, shopping, and jobs. The livability of a city is shaped by how easy it is to access essential resources and services. One factor in this accessibility is the adequate provision of these public goods—there need to be enough parks, schools, jobs, etc. for the population. However, regardless of supply, these resources need to be easily accessible to the residents of a city.

PARKS AND SCHOOLS

One of the most crucial public services, parks provide opportunities for active recreation—whether impromptu or organized sports—passive activities like walking, relaxation, a connection with nature, community gatherings, and spontaneous meetings. While much of the housing in Lodi consists of single family detached homes with yards, parks still provide a unique and needed resource for almost all residents and for the community as a whole.

Given their crucial role in the city, parks should generally have maximum accessibility. Consequently parks should be located so that the citywide street system places them a quick walk, bike ride, or drive from many homes. Similarly, parks should be sited near as many people as possible—a park near high density housing is more needed than a park located in an industrial area or sparsely populated rural areas. That said, if the purpose of a smaller park is to serve as a focal point for a neighborhood, it can be appropriate for it be located based on local access rather than citywide convenience. Furthermore, for reasons of safety, aesthetics, and efficiency, parks should generally not be located on major traffic corridors.

Schools are another essential public facility, providing education and also playgrounds, indoor space for community gatherings, and a sense of local identity. Children also travel to them every day, often by walking. Given schools' role in the community and the importance of easily reaching

them from housing, they should generally be surrounded by residential uses, yet be readily accessible. Furthermore, many schools have playgrounds, ball courts, or other recreational facilities so they can sometimes replicate the assets of a public park.

As a corollary to the above discussion, since almost all residential uses include children, housing should have easy access to a school. For the sake of recreation, quality of life, and community, all housing should also be able to access a public park with denser residential areas being in greater need due to larger number of people involved and the lower likelihood of them having private open space.

Mapping Methodology

Figure 5-1 maps the parks and schools in Lodi and shows a five minute walking radius from each. This radius is determined by calculating a ¼-mile distance along Lodi's street network from a park or school (on average people take 20 minutes to walk a mile). This method therefore takes into account actual walking distance, which is affected by the street grid. Cul-de-sacs, long blocks, and 3-way rather than 4-way intersections all prevent direct connections between points and can lengthen walking distance. This approach also considers a park or a school's link into the street system—as seen with the parkspace along the Mokelumne River, the walking distance was measured from public access points. As a result, facilities that are connected to only one or two streets are often harder to access since fewer routes to them are available.

Lodi is home to 24 developed and six undeveloped parks and open spaces, which include a variety of types and sizes, including dual-use retention basins. The city also possesses 21 public schools. The walking radius analysis treats all parks and schools the same and does not explicitly take their size or type into account, although parks and schools with more acreage usually have a larger catchment area.

The densities of residential uses are not shown because housing throughout Lodi is generally low density, single family attached homes, with a few small pockets of multi-family and moderate density. There are no broad sections of the city that are characterized by moderate to high density.

Accessibility Patterns

Figure 5-1 shows that much of the residential land in Lodi is within a five minute walk of a park or a school. Parks are located within a ¼-mile trip of 1,600 acres (excluding rights-of-way), of which 65 percent (1,040 acres) contains residential uses. Public schools are a ¼-mile walk from 1,760 acres, of which 62 percent (1,090 acres) is residential.

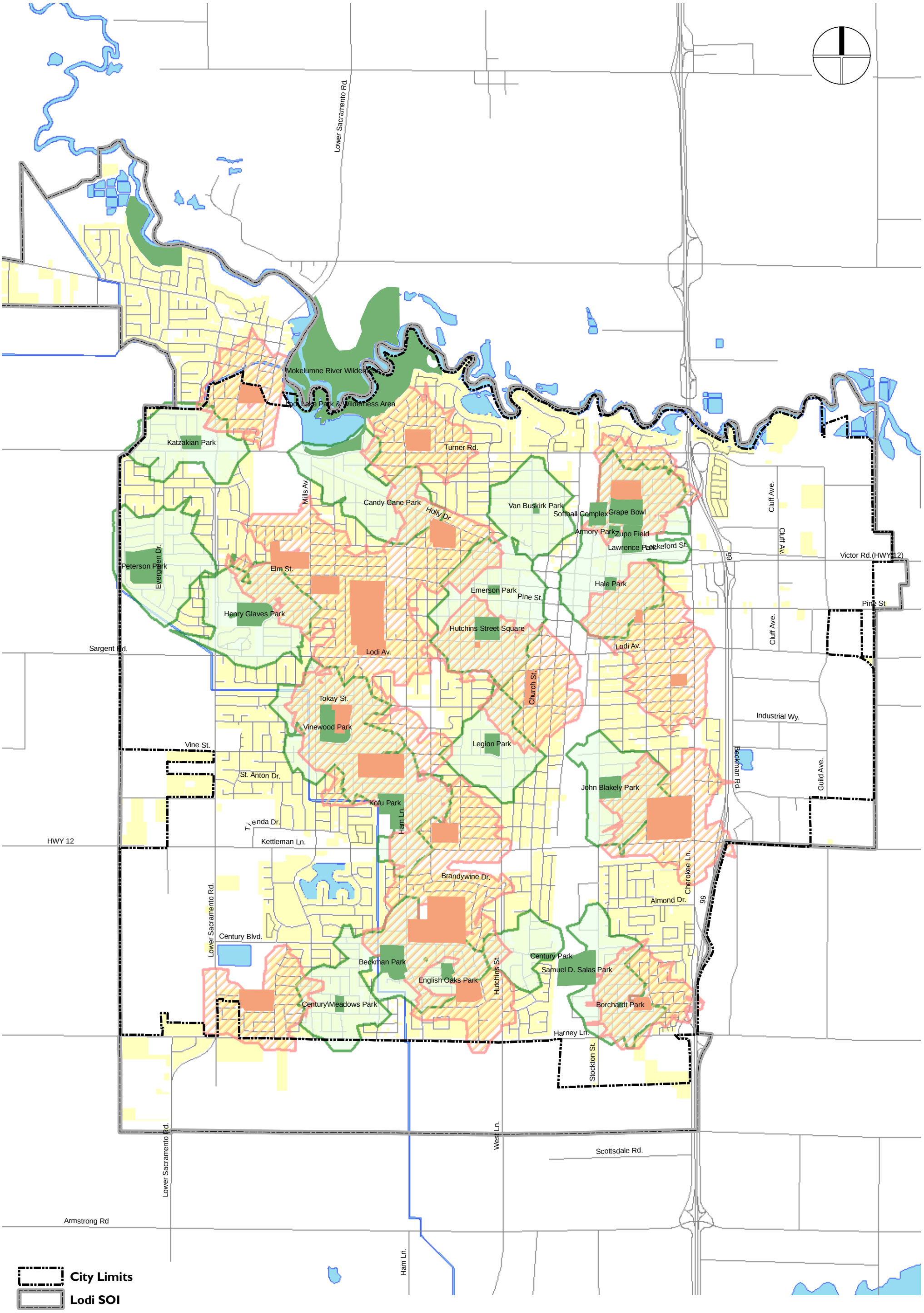


Figure 5-1

City of Lodi
Parks and School Accessibility

September 2007

DYETT & BHATIA
Urban and Regional Planners

0 0.5 1 Miles

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Many of the walking radii overlap with one another, however, resulting in 2,655 acres (again, excluding rights-of-way) being within a ¼-mile walk of a park or school. Of this land, 1,700 acres, or 64 percent of that land, have a residential use. Given that the city has around 2,920 acres in total devoted to residential uses, this means that 58 percent of the residential land in Lodi is within a five minute walk of a park or school.

Figure 5-1 shows that Lodi has a thorough network of parks and schools which are well-distributed around the city. A significant area of southwest Lodi currently lacks parks or schools, but two parks are proposed for the area which should remedy that gap in coverage and significantly increase the proportion of residential land served. Figure 5-1 also reveals several patterns about the accessibility of the city's parks and schools:

1. Lodi's parks are concentrated in several "belts" around the city, providing the opportunity for an interconnecting trail or bike path system, but leaving some areas well-served by parks and others without access to a nearby park.

   Many of these gaps in coverage appear to be the affect of major roadways—Kettleman Lane, Turner Road, and Lower Sacramento Road—as well as the railroad not having parks located along or near them. While this is appropriate for public parks, it does mean that major roads can have an isolating effect within the community. While arterials often allow quick automobile access from one part of the city to another, they also serve as obstacles to pedestrians and bike riders and also create "empty buffers" without parks or schools. As a result, major roads create separation within the city and reduce the accessibility of existing public resources.

2. A smaller number of large parks—particularly on the west side of the city—does not provide the same kind of accessibility as a mix of park sizes located closer together, as can be seen in the southern part of Lodi.

   The larger parks are sited with more distance between them, which generally explains their lesser accessibility. Larger parks do provide more space for active recreation and sports fields. However, mixing park sizes and types may be a better way of maximizing park function, supply, and accessibility all at once.

3. Public space along the river does not provide much amenity because it is not easily accessible.

   The river can only be reached off of Turner Road near Mills Avenue. The residential areas along the river do not offer access to it through their property, so this greatly limits public opportunity to reach and use this public space.

4. Most parks and schools in the city have similar levels of accessibility.

   The ¼-mile walking radius for each park and school is roughly similar in size and shape. This is a positive finding and suggests that the street networks around parks and schools are well connected. The notable exceptions are Salas Park, which has limited access due to the railroad, and Kofu Park, which has industrial uses to its south and the canal to its west.

5. A large section of central Lodi lacks public parks, but is well served by schools.

   A significant section of the city, roughly centered on Lodi High School, is devoid of any public parks besides river access and Candy Cane Park, which is a 0.2 acre mini-park. Excluding those two examples, much of the area stretching northeast of Henry Glaves Park to the river is without any public open space. However, that area is very well served by five public schools, all of which have significant space for outdoor recreation. This is a good example of how parks and schools can provide similar attributes—space for recreation and community gathering, as well as local identity—and be located to complement one another.

6. Kettleman Lane and the railroad separate the park and school network of central Lodi from residential areas to their south and east, respectively.

   The east and south sides of Lodi have their own parks and schools, but few are sited near Kettleman Lane or the railroad. While this is appropriate, given the lack of residential uses along those rights-of-way, the result is a separation from the core of the city.

These patterns suggest some principles and policies about parks and schools that the community should consider to enhance their accessibility:

- Public schools should have joint use recreation space.
- Parks and schools should be sited to complement each other, with residential areas covered by one or the other but not necessarily both.
- If larger parks are built in an area, smaller parks or schools should be strategically located to provide better accessibility to a community/green area.
- A trail/path system could connect parks to schools, and to one another. This would be especially useful in areas where a variety of park types and schools exist, enabling easy movement between the different facilities as needed.

- Consider bike lanes, trails, or linear parks to connect housing south of Kettleman Lane with the rest of Lodi.
- Install a pedestrian/bike crossing between Century and Salas parks, across the railroad tracks.

JOBS AND SERVICES

Ready access to employment, stores, and service commercial uses is another crucial component of livability. Quick commutes and the ability to easily run errands and make household purchases frees up time for personal activities, reduces the cost of everyday transportation, lowers the amount of traffic congestion, and limits the emission of greenhouse gases.

Accessibility to jobs and services can be provided through a combination of strategies, including:

- Residential neighborhoods can contain space for low-impact jobs and services, like offices or neighborhood-serving retail like small grocers and dry cleaners.
- Non-residential land uses can be evenly distributed around the city in activity nodes, rather than concentrating all jobs and services downtown or in large business park clusters.
- Higher density buildings can be designed to contain several different uses—jobs, services, and housing.
- Jobs and services can be located along major streets (linear distribution) and/or at intersections (nodes).
- The citywide street network can be designed efficiently, with grids and point-to-point trips, rather than cul-de-sacs and curvilinear streets that increase travel time.

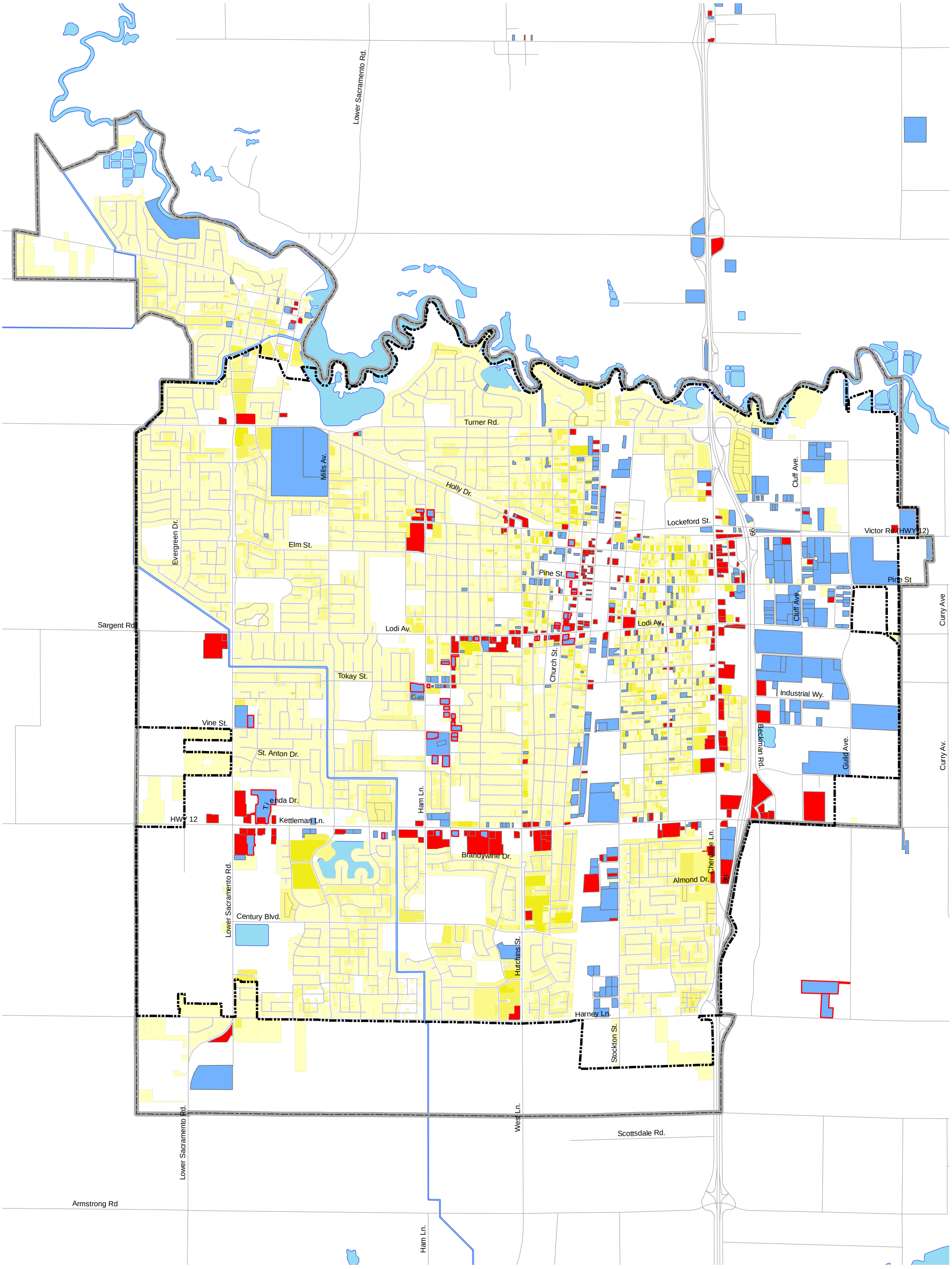
There are limits to these strategies, of course. Jobs and services that involve a large amount of traffic, noise, noxious emissions, or other disruptive characteristics should not be located close to residential uses.

Mapping Methodology

Figure 5-2 maps the location of major jobs and services in Lodi, as well as residential uses. This was done broadly and by land use, and not examined at the level of individual businesses—the intent was to get a "big picture" idea of job and service distribution in the city.

- Jobs were assumed to be concentrated in manufacturing and commercial land uses—factories, hotels, and offices—as well as certain public uses.

- Land uses that provide goods and labor for personal benefits—banks, grocery stores, automobile repair shops, gas stations, restaurants, department stores, etc.—were marked as services.
- Land uses that are both employment centers and frequent destinations for residents, such as hospitals and shopping centers, were marked as having both functions.



City Limits
Lodi SOI
Jobs & Services
Jobs
Services
Roads

Residenitial Density

Low
Medium
High
Very High

October 2007

DYETT & BHATIA
Urban and Regional Planners

Figure 5-2
City of Lodi
Location of Major
Jobs and Services

0 0.5 1 Miles

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Public schools were not marked as providing jobs or services, although hundreds of children and many teachers commute to each one everyday. These were not included because of their unique usage patterns, and because they are mapped on Figure 5-1, but if included they would indicate a better distribution of jobs and services.

Patterns

Figure 5-2 reveals several patterns in the accessibility of jobs and services in Lodi:

1. Many services are concentrated in a few parts of Lodi: in downtown and along Kettleman Lane, a portion of Fairmont Avenue, Lodi Avenue, and Cherokee Lane. However, there are also pockets of services at major intersctions on Ham Lane, Lockeford Street, Hutchins Street, and Lower Sacramento Road.

2. Jobs are a little less distributed around the city, with concentrations east of Highway 99, along the rail corridor, in downtown, and on Kettleman Lane and Lodi Avenue.

   The General Mills plant at Turner Road and Mills Avenue is major employment center and job centers exist at points on Ham Lane, Tokay Street, and Fairmont Avenue in central Lodi, plus one at Vine Street and Lower Sacramento Road. In general, land uses with jobs have a similar distribution to services but are a little less scattered.

3. Jobs and services are generally located in the same areas.

   The exceptions are several shopping centers that serve as primarily service nodes and the large area of jobs without services mixed in to the east of Highway 99, although those are adjacent to a service-only strip along Cherokee Lane. Ultimately, non-residential uses in Lodi are fairly concentrated, with the remainder of the city dominated by residential-only areas. Very few jobs or services are sited within a residential area, although some employment centers are located in Old Lodi.

   Not many individual sites provide both jobs and services, but most non-residential areas located jobs and services in close proximity to one another.

4. Small-scale services are largely absent from northwest and southwest Lodi.

   Residents in northwestern quarter of the city, as well as the housing located along the southern edge of Lodi, appear to lack small, nearby stores and instead have longer trips to large shopping centers on Ham Lane and Lower Sacramento Road. It is unclear whether these residents view this situation as positive or negative in terms of livability.

5. Most jobs and services are located on major thoroughfares.

   The jobs and services along Kettleman Lane and Lodi Avenue are particularly well positioned for accessibility—residential uses are located to their immediate north and south, and the street is an arterial with a capacity for high amounts of traffic.

6. Services are mostly distributed linearally along roads.

   This often requires users to use a car to move from one business to another, increasing time and traffic congestion. In comparison, clusters of services allow users to park at a single location for a longer period of time. Clustered development can only be found in downtown and at the intersection of Kettleman Lane and Lower Sacramento Road.

Overall, the jobs and services of Lodi appear to be largely accessible to many of the city's residential areas. The varied location, form, and uses of the city's non-residential areas provide a number of options to residents, are strategically located close to housing, and often provide a mix of jobs and services in the same area. However, as existing patterns of jobs and services perpetuate, new residential areas in the west and the south are located at increasing distances from them.

6 Issues and Implications

6.1 LIVABILITY ISSUES

What are the livability issues in Lodi that need to be addressed in the General Plan revision process? How might future demographic and economic changes in the city affect livability in the next 10-20 years? The challenge is to arrive at a consensus on the livability issues in Lodi that need to be addressed in the General Plan revision process, and to determine how they should be addressed. In addition to issues and concerns identified by the residents, ongoing trends that are likely to impact livability include growth and changing demographics.

GROWTH

Future growth is likely to impact several aspects of Lodi's livability. With demands for increased vehicular movement, there will be pressure to widen streets and highways and to expand the network into the countryside. As traffic increases in amount and speed, pedestrian walkability and bicycle access will be jeopardized, along with neighborhood quiet and the street landscape.

The small town character of many neighborhoods is very fragile and can disappear almost overnight as new roads and projects are built that are out of tune with this quality. There will be enormous pressures for growth at the edge where land is more available and easier to develop, but once the ring of open land is filled in, the sense of connectedness with the regional landscape will be gone or greatly diminished. These are but a few of the likely impacts of future growth on local livability.

CHANGING DEMOGRAPHICS

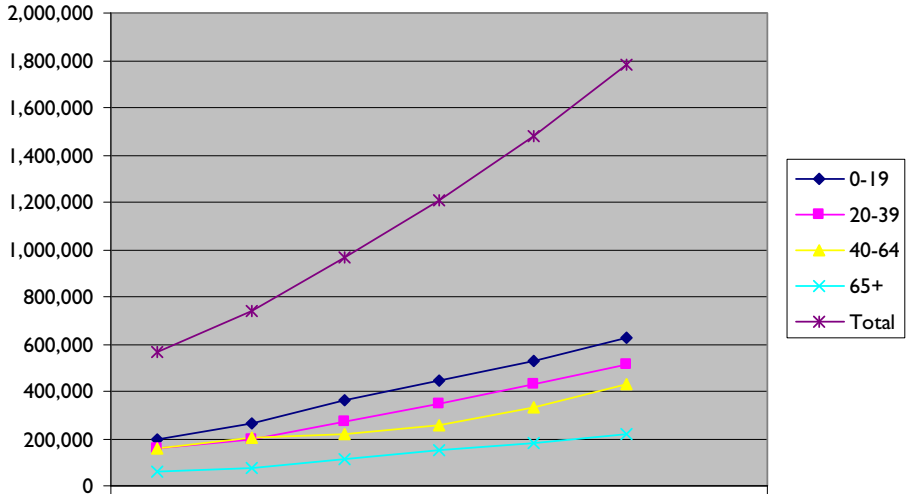
Demographic changes—such as shifts in the proportion of the population with a particular age or race—can impact the types of housing people desire and the kinds of neighborhoods they wish to live in. Nationally, population trends are generally moving toward more single adults and elderly people, meaning a smaller percentage of traditional families, and a increase in racial—and likely cultural—diversity.

The State of California prepares projections of population by age, race, and gender for every county.[2] While much of the future growth in San

[2] State of California, Department of Finance, Population Projections for California and Its Counties 2000-2050, by Age, Gender and Race/Ethnicity, Sacramento, California, July 2007.

Joaquin County is likely to concentrate on Stockton, the population in and around Lodi will increase as well. The latest State projections (as of July 2007) expect the County population to grow from 569,083 in July 2000 to 741,417 in July 2010 and eventually to 1,783,973 by the year 2050, more than doubling the number of county residents over 50 years. Figure 6-1 provides details by decade.

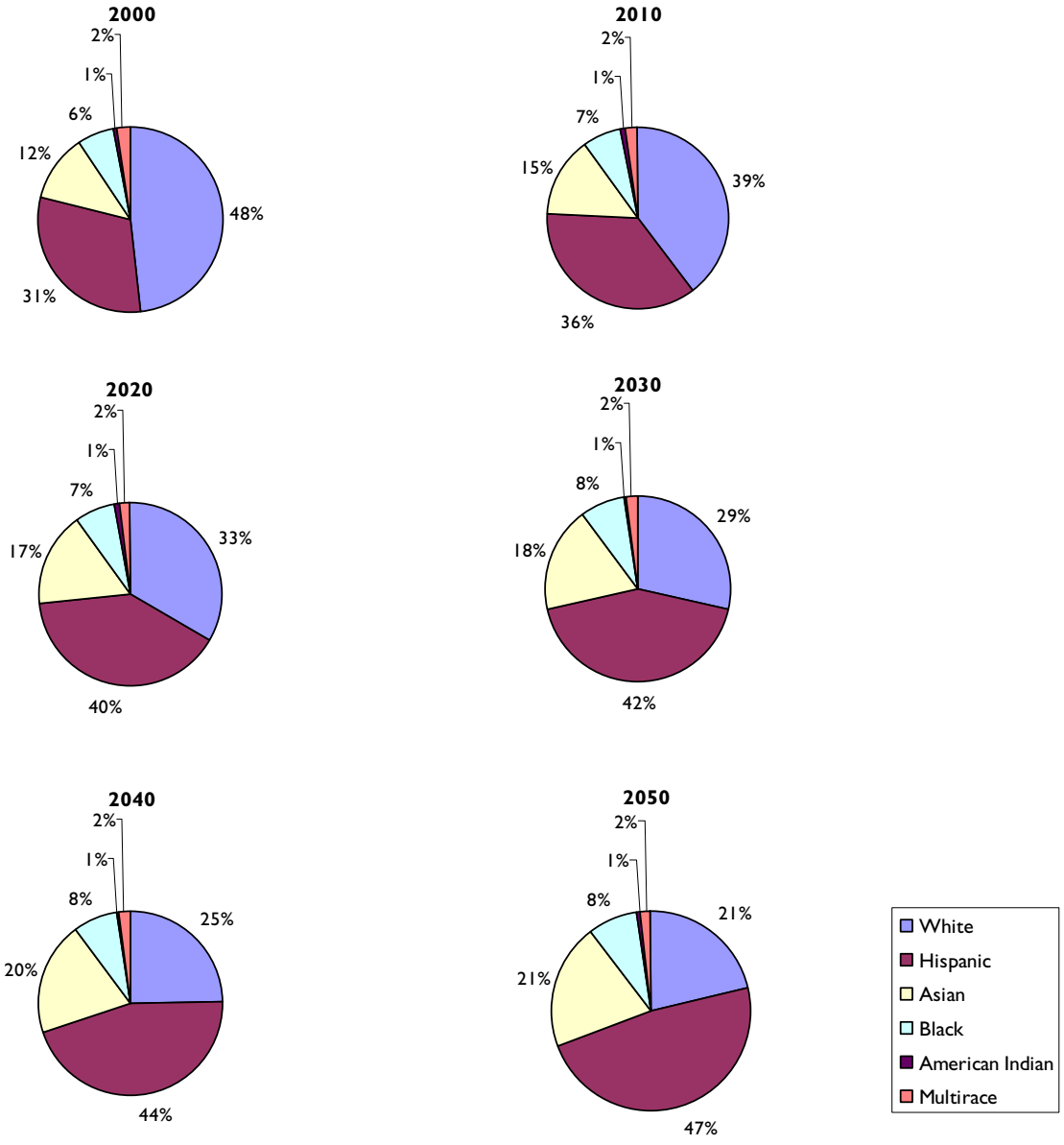
Figure 6-1: Projected Population Growth of San Joaquin County



	2000	2010	2020	2030	2040	2050
0-19	195,316	267,670	359,970	445,158	532,045	623,385
20-39	158,481	197,280	273,822	345,894	428,399	513,101
40-64	155,452	202,612	221,141	259,991	335,835	428,666
65+	59,834	73,855	110,161	154,155	181,194	218,821
Total	569,083	741,417	965,094	1,205,198	1,477,473	1,783,973

The State projects that, as its population grows, San Joaquin County's racial makeup will also change. As Figure 6-2 shows, the proportion of residents who are white is expected to decrease from 48 percent to 21 percent between the years 2000 and 2050. Meanwhile, Hispanics will grow from 31 percent to 48 percent of the population and Asians will increase from 11 percent to 21 percent. The proportion of black residents will go up slightly, from 6 to 8 percent, while other race groups (Pacific islanders, American Indians, and multi-race people) will stay at the same levels. The population of all races is expected to increase between 2000 and 2050, but Hispanics and Asians will grow faster than all the others.

Figure 6-2: Projected Racial Make-up of San Joaquin County



However, the State anticipates that the age distribution of the county's population will remain largely the same, shifting only one or two percentage points from the current breakdown: 34 percent aged 0 to 19, 28 percent aged 20 to 39, 27 percent aged 40 to 64, and 11 percent aged 65 years or more. No locally focused projections were available for household size.

6.2 IMPLICATIONS FOR THE GENERAL PLAN

Livability issues could be addressed directly in the General Plan. Based on the stakeholder interviews, livability survey, community meetings, conversations with planners, and field analysis, several aspects of livability in Lodi have a higher profile and could be enhanced through General Plan policies: Streets, Connections, Public Spaces, Activity Centers, Housing, and Neighborhood Character.

STREETS

Street design, traffic calming, and street landscape design can make enormous contributions to the creation of successful neighborhoods in both the existing city and in new development. The street landscape is a major element in creating neighborhood identity. Good neighborhoods are usually walkable, and offer an attractive street network with spaces for pedestrians and bicyclists. Streets are quiet and safe, supporting social interaction.

In Lodi, the central portions (Old Lodi) generally have the most street trees. As newer areas radiate out of this core, they are generally marked by fewer and fewer trees. Finding space for street trees in newer residential areas is also a challenge as large home frontages are devoted to garages.

Planting trees along streets are a particularly powerful tool available to city governments to enhance livability. Donald Appleyard gives several reasons people like street trees in Livable Streets (Berkeley and Los Angeles: University of California Press, 1981, p. 66):

- They provide shade.
- They make the street more alive by their movement and richness.
- They are soothing to the eyes.
- They purify the air and increase the oxygen content.
- They hide buildings.
- They add a sense of privacy.
- They provide contact with nature and give warmth as opposed to the hardness of cold concrete.
- They cut down on noise.

- They can make the streets look neat and provide residents with an opportunity to show that they care for them.
- They provide identity if they are unique or California species.

Some policies to consider for the updated General Plan include:

- Study the implementation of traffic calming techniques on residential and collector streets in order to slow traffic, thereby reducing road noise and increasing walkability, such as narrow streets (cf. Portland's "skinny streets" program), on-street parking, chokers, bumps, paved crosswalks, rumble strips, diverters, shared streets (woonerfs), and pavement embedded pedestrian crossing lights.
- Install planted medians on wide streets to make them more pedestrian/bicycle friendly.
- Consider the possibility of multi-function divided boulevards for major arterials.
- New sidewalks should have a planted strip between them and a street, in order to provide a visual transition to street, as well as shade from trees.
- Require bicycle lanes on new collector and arterial roads.
- Create a pervasive bicycle path network in the City by linking existing bike paths and filling in gaps with new Class I, II, or III paths.
- Design standards or controls for street appearance; designate and regulate scenic roads.
- Write and execute a street tree plan for major streets.
- Humanize the city's existing and new commercial strips through landscape design, parking placement and design, infill development, signing, lighting, pedestrian/bicycle access, links to neighborhoods, social spaces, and limits on curb-cuts.
- Provide continuous sidewalks, and ensure sage and visually rich experience for pedestrians, including along collector and arterial streets.

CONNECTIONS

Many people value neighborhoods that are not islands, but that are well-connected by streets, pathways, and transit to local shops and services, schools, and recreation. Opportunities for strengthening connections between neighborhoods, local centers, public spaces, regional parks, and the Downtown shopping area should be studied.

General Plan policies to consider include:

- Pursue pedestrian and bicycle connectedness to local centers, schools, parks and other open space, and downtown, with an integrated city wide system of non-motorized transportation as the long term goal.
- Seek ways of linking quadrants of the city that are now divided by the railroad corridor.
- Expand the transit network to serve population increases and reduce their impact on traffic levels.
- Looks for ways of enhancing access to the riverfront.
- Develop land use patterns that support connectivity.

PUBLIC SPACES

Attractive public spaces are valued by most residents. The General Plan might create a plan for a framework of public spaces at the neighborhood, city and regional scale by assessing the existing situation, and looking for new opportunities for parks, plazas, and trails. Options could include exploring potentials for the railroad corridor and abandoned railroad rights-of-way, new bicycle and pedestrian routes, or new parks and conservation areas.

General Plan policies to consider include:

- Policies that encourage lively, mixed-use spaces Downtown, and that discourage dead parking garage, parking lot, or office block frontage.
- Create new multi-age, multi-use parks in neighborhoods that are deficient in open space.
- Design public spaces to encourage use and visual access from public ways.
- Provide public spaces that vary in program and appearance.
- Acquire land at the edge to form a greenbelt, and also protect key parcels that have special character or ecological value within the developed area. Following the German model, a farm might be acquired for educational and cultural programs, as well as to preserve rural visual character.
- Provide a pedestrian greenway along the north bank of the Mokelumne River.
- Construct a pedestrian bridge to allow people to walk all the way around Lodi Lake.

ACTIVITY CENTERS

Most residents value neighborhoods that are anchored by centers of activity such as shops, services, schools, health centers, cultural institutions, or recreational facilities. Land use patterns and development guidelines could support local centers and assure their contribution to the local neighborhood environment.

General Plan policies to consider include:

- Create neighborhood centers that contain a mix of small-scale local shops and services; encourage a walkable village character rather than strip malls.
- Relate shops to streets, not parking lots.
- Centers should be designed as places where people want to spend time; social space supports commercial space and vice versa.
- Retrofit existing strip malls into places where people enjoy spending time. Employ strategies such as pedestrian-oriented landscape design, parking placement and design, infill development, signing, lighting, pedestrian/bicycle access, and circulation links to residential neighborhoods.
- Set a maximum size for office/commercial development in order to maintain a small scale; discourage malls and office parks in most zones except for neighborhoods that want more of these.
- Look for ways to integrate layer format retail (big boxes) into pedestrian-scaled environments, rather than simply auto-oriented arterials.

HOUSING

Where will all the new housing needed in Lodi be built over the next 20 years? This is a difficult issue. No one wants to give up open space or views, but the population will grow as people continue to move to California and to the Central Valley. There are opportunities for providing infill housing within the built-up areas of the city on sites that are vacant or underutilized. Infill housing that relates to the scale and character of existing neighborhoods can reduce pressure for outward expansion into green space. However, given Lodi's compact development pattern and relative scarcity of infill sites, new land will likely be needed for development.

General Plan policies to consider include:

- Develop housing in and within ½ mile of downtown to take advantage of people's interest in being near the jobs and shops there and its existing walkable nature. Encourage the creation of denser

residential uses in the downtown area, such as live/work space, townhouses, and apartments above stores.

- To maintain the small town/rural visual character of Lodi that people value, support infill housing over residential development that consumes agricultural and open land.
- Ensure a mix of housing types is built in order to meet the needs of a diverse population in age and family types.
- Consider a rural village model for new development at the city's edge: clusters of housing with proximity to farm and open land, informal landscape of wild flowers and native grasses, minimal lawns, natural drainage, encouragement of small scale agriculture, and gravel paths.
- Require publicly visible and accessible greenbelt or open space in new developments on the edge.
- Create housing design standards that reinforce Lodi's vernacular housing and avoid a generic appearance, instead promoting development with the character of Lodi's most valued and historic neighborhoods. Keep street widths narrow to avoid expansive asphalt.

NEIGHBORHOOD CHARACTER

Maintain and enhance neighborhood character. Lodi's neighborhoods are very diverse, ranging from country roads with historic farmhouses to historic neighborhoods of Victorian cottages and California bungalows to recent large-scale master planned developments. The General Plan should include policies to maintain and enhance the character if these neighborhoods, such as:

- Protect landmark structures and landscapes, such as fields, vineyards, and the river.
- Establish special design districts with their own guidelines for neighborhoods of distinct character.
- For new residential or commercial development adjacent to pasture or vineyards, establish rural design guidelines to maintain the character many Lodi residents value: rural fence styles, informal planting, large stands of trees, natural drainage rather than curb and gutter, gravel paths, wild flowers and other native plants; encourage small scale agriculture, avoid lawns and manicured plants.
- New development should avoid a suburban tract approach. Instead it should connect with its nearby landscape and context, include paths to connect it to the rest of the city, exhibit architectural variety, conform to scale requirements, and relate housing to public streets.

6.3 CONCLUSION

In order to have real impact on the quality of Lodi's built environment, policies and actions ideally would be spread over the entire city to improve the everyday environment for all citizens. All scales of urban form affect livability, from the design of individual home sites, to neighborhood streets and parks, to citywide systems of arterial streets and open space. A highly livable city works at each scale. Fortunately, a significant number of elements that impact quality of the urban environment are part of citywide systems: streets, parks, public buildings, cultural institutions, systems of lighting and signage, and utilities. These amount to a large percentage of the American city—typically about fifty percent—that is in public ownership or control. This gives a city like Lodi great leverage for improving livability. Unfortunately, most cities continue to focus on site-specific projects, often concentrating efforts in planned unit developments (PUDs), office or industrial developments, big box shopping malls, and tract developments that favor economic value rather than impacts on the everyday environment. In many cities the trend has been toward privatization, especially at the developing urban edge. In order to reduce costs cities have sacrificed the public realm, shifting responsibility to the private sector.

Addressing livability in the General Plan will be an exciting and challenging process. It will require creativity and a willingness to develop a plan that breaks out of the typical general plan model. Most of all, it will require commitment from the city's residents and elected officials to preserve and manage the qualities of Lodi they most value.

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Appendix: Lodi Resident Survey

LODI RESIDENT SURVEY

PLEASE RETURN AT THE END OF THE WORKSHOP

As part of the Lodi General Plan Update process, we would appreciate your responses to a few questions about your neighborhood and the city.

a. Please draw a simple map of the part of Lodi where you live in the space below.
Show the major streets and places that are important to you. Mark the location of your home with an "X".
Don't worry about accuracy and please *don't* refer to a map.

b. What is the name of your neighborhood or the area of Lodi where you live?_____

c. Your address or intersecting streets_____

d. How long have you lived in this part of town? _____ How long have you lived in Lodi? _____

e. List the places and/or things you like best about your neighborhood:

f. List any improvements you would like to see in your neighborhood:

g. What neighborhood in Lodi other than your own would you like to live in? Why?

h. List any places in Lodi where you like to spend free time other than your home or yard.

i. What do you like best about living in Lodi?

j. Is there anything you think would improve Lodi as a place to live?

PLEASE RATE LODI AND YOUR NEIGHBORHOOD BELOW

How much do you agree with the statement?						How important is this to you?				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		Very Unimportant		Neutral		Very Important
1	**2**	**3**	**4**	**5**	1. Lodi is an attractive city.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	2. There are a lot of things to do in Lodi.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	3. Lodi is a comfortable place to live.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	4. The places in Lodi that mean the most to me have been preserved.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	5. Lodi has a variety of civic events (festivals, fairs, block parties, street markets, concerts, parades, etc.).	1	2	3	4	5
1	**2**	**3**	**4**	**5**	6. Lodi has enough green space.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	7. Lodi has good neighborhoods.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	8. My neighborhood has attractive sidewalks and streets (trees, landscaping, paving, lighting).	1	2	3	4	5
1	**2**	**3**	**4**	**5**	9. My neighborhood is a good place to go for a walk.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	10. I live near a nice park.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	11. My neighborhood is a good place for bicycling.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	12. Automobile traffic is not a problem for pedestrians and bicyclists in my neighborhood.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	13. My neighborhood has a mix of housing types (apartments, houses, duplexes, townhomes).	1	2	3	4	5
1	**2**	**3**	**4**	**5**	14. Noise is not a problem in my neighborhood.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	15. My neighborhood is near shopping and services.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	16. My neighborhood has access to public transportation.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	17. My neighborhood is near schools and other educational facilities.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	18. My neighborhood has recreation facilities and programs for all ages.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	19. My neighborhood is safe.	1	2	3	4	5
1	**2**	**3**	**4**	**5**	20. Overall, my neighborhood is a great place to live.	1	2	3	4	5

Please provide information on the following if you feel comfortable doing so.

Age_____ **female** **male** **Ethnicity**_____

Thank you for your assistance in the Lodi General Plan process!

DYETT & BHATIA
Urban and Regional Planners

755 Sansome Street, Suite 400
San Francisco, California 94111
415 956 4300 415 956 7315